

SI-MNH-955a
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 13 July 1964

Total Minutes: 314

Total Miles 7

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>51</u>	<u>944</u>	<u>18.51</u>	<u>18.51</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>33</u>	<u>15</u>	<u>2</u>	<u>17</u>	<u>206</u>	<u>169</u>	<u>4</u>	<u>32</u>	<u>6.24</u>	<u>11.27</u>	<u>2.00</u>	<u>1.88</u>	<u>4.04</u>	<u>3.31</u>	<u>.08</u>	<u>.63</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
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IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>21</u>	<u>726</u>	<u>34.57</u>	<u>14.20</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
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VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>4</u>	<u>-</u>	<u>4</u>	<u>-</u>	<u>11</u>	<u>-</u>	<u>11</u>	<u>-</u>	<u>2.75</u>	<u>-</u>	<u>2.75</u>	<u>-</u>	<u>.21</u>	<u>-</u>	<u>.21</u>	<u>-</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1.00</u>	<u>.02</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>6</u>	<u>869</u>	<u>.12</u>	<u>4</u>	<u>825</u>	<u>.06</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 14 July 1964 Total Minutes: 789 Total Miles 125

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>60</u>	<u>196</u>	<u>3.27</u>	<u>1.57</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>50</u>	<u>24</u>	<u>22</u>	<u>11</u>	<u>105</u>	<u>56</u>	<u>33</u>	<u>11</u>	<u>2.10</u>	<u>2.33</u>	<u>1.50</u>	<u>1.00</u>	<u>.84</u>	<u>.45</u>	<u>.26</u>	<u>.09</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>1</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>1.00</u>	<u>-</u>	<u>-</u>	<u>.01</u>	<u>-</u>	<u>-</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>11</u>	<u>87</u>	<u>7.91</u>	<u>.70</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u> </u>	<u> </u>	<u> </u>	<u> </u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>2</u>	<u>3</u>	<u>1.50</u>	<u>.02</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>4</u>	<u>114</u>	<u>.03</u>	<u>2</u>	<u>102</u>	<u>.02</u>

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 15 July 1964

Total Minutes: 779

Total Miles 195

1. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
415	190	4.22	1.31

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
44	8	34	-	152	23	63	-	3.15	2.88	1.85	-	1.05	.16	.43	-

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
3	38	12.67	.26

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
1	1	1	1
2	2	1	2
3	3	1	3
4	4	1	4
5	5	1	5
6	6	1	6
7	7	1	7
8	8	1	8
9	9	1	9
10	10	1	10
11	11	1	11
12	12	1	12
13	13	1	13
14	14	1	14
15	15	1	15
16	16	1	16
17	17	1	17
18	18	1	18
19	19	1	19
20	20	1	20
21	21	1	21
22	22	1	22
23	23	1	23
24	24	1	24
25	25	1	25
26	26	1	26
27	27	1	27
28	28	1	28
29	29	1	29
30	30	1	30
31	31	1	31
32	32	1	32
33	33	1	33
34	34	1	34
35	35	1	35
36	36	1	36
37	37	1	37
38	38	1	38
39	39	1	39
40	40	1	40
41	41	1	41
42	42	1	42
43	43	1	43
44	44	1	44
45	45	1	45
46	46	1	46
47	47	1	47
48	48	1	48
49	49	1	49
50	50	1	50
51	51	1	51
52	52	1	52
53	53	1	53
54	54	1	54
55	55	1	55
56	56	1	56
57	57	1	57
58	58	1	58
59	59	1	59
60	60	1	60
61	61	1	61
62	62	1	62
63	63	1	63
64	64	1	64
65	65	1	65
66	66	1	66
67	67	1	67
68	68	1	68
69	69	1	69
70	70	1	70
71	71	1	71
72	72	1	72
73	73	1	73
74	74	1	74
75	75	1	75
76	76	1	76
77	77	1	77
78	78	1	78
79	79	1	79
80	80	1	80
81	81	1	81
82	82	1	82
83	83	1	83
84	84	1	84
85	85	1	85
86	86	1	86
87	87	1	87
88	88	1	88
89	89	1	89
90	90	1	90
91	91	1	91
92	92	1	92
93	93	1	93
94	94	1	94
95	95	1	95
96	96	1	96
97	97	1	97
98	98	1	98
99	99	1	99
100	100	1	100

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
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VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
4	132	.03	2	117	.01

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 16 July 1964 Total Minutes: 754 Total Miles 140

1. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
44	171	3.89	1.22

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
41	11	27	-	117	64	44	-	2.85	5.82	1.63	-	.84	.46	.31	

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT


IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
4	54	13.50	.39

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
															

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
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VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
1	116	.01	1	116	.01

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 17 July 1964

Total Minutes: 764

Total Miles 127

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>15</u>	<u>17</u>	<u>1.13</u>	<u>.13</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>14</u>	<u>5</u>	<u>6</u>	<u>-</u>	<u>16</u>	<u>5</u>	<u>6</u>	<u>-</u>	<u>1.14</u>	<u>1.00</u>	<u>1.00</u>	<u>-</u>	<u>.13</u>	<u>.04</u>	<u>.05</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>1</u>	<u>1</u>	<u>-</u>	<u>1</u>	<u>1</u>	<u>-</u>	<u>1.00</u>	<u>1.00</u>	<u>-</u>	<u>.01</u>	<u>.01</u>	<u>-</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u> </u>	<u> </u>	<u> </u>	<u> </u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u> </u>	<u> </u>	<u> </u>	<u> </u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u> </u>	<u> </u>	<u> </u>	<u> </u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>0</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 12 Feb 1964 Total Minutes: 777 Total Miles 137

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>44</u>	<u>283</u>	<u>6.43</u>	<u>2.07</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>40</u>	<u>6</u>	<u>36</u>	<u>-</u>	<u>199</u>	<u>64</u>	<u>131</u>	<u>-</u>	<u>4.98</u>	<u>10.67</u>	<u>3.64</u>	<u>-</u>	<u>1.45</u>	<u>.47</u>	<u>.86</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>3</u>	<u>3</u>	<u>-</u>	<u>3</u>	<u>3</u>	<u>-</u>	<u>1.00</u>	<u>1.00</u>	<u>-</u>	<u>.02</u>	<u>.02</u>	<u>-</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>3</u>	<u>81</u>	<u>27.00</u>	<u>.59</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u> </u>	<u> </u>	<u> </u>	<u> </u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u> </u>	<u> </u>	<u> </u>	<u> </u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>4</u>	<u>225</u>	<u>.03</u>	<u>4</u>	<u>225</u>	<u>.03</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 19 July 64 Total Minutes: 291 Total Miles 118

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>48</u>	<u>352</u>	<u>7.96</u>	<u>5.24</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>40</u>	<u>12</u>	<u>25</u>	<u>-</u>	<u>155</u>	<u>71</u>	<u>65</u>	<u>-</u>	<u>11.63</u>	<u>5.92</u>	<u>2.60</u>	<u>-</u>	<u>1.50</u>	<u>.64</u>	<u>.55</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>4</u>	<u>1</u>	<u>2</u>	<u>4</u>	<u>1</u>	<u>2</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>.03</u>	<u>.01</u>	<u>.02</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>6</u>	<u>191</u>	<u>31.83</u>	<u>1.62</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1.00</u>	<u>.01</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1.00</u>	<u>.01</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>4</u>	<u>323</u>	<u>.03</u>	<u>4</u>	<u>323</u>	<u>.03</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 20 July 64 Total Minutes: 784 Total Miles 121

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>33</u>	<u>910</u>	<u>27.58</u>	<u>7.52</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>27</u>	<u>13</u>	<u>6</u>	<u>1</u>	<u>242</u>	<u>143</u>	<u>151</u>		<u>8.96</u>	<u>11.50</u>	<u>1</u>		<u>2.00</u>	<u>1.20</u>	<u>.12</u>	<u>.01</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>2</u>	<u>1</u>	<u>1</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>.02</u>	<u>.01</u>	<u>.01</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>13</u>	<u>613</u>	<u>47.15</u>	<u>5.48</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>2</u>	<u>3</u>	<u>1.50</u>	<u>.02</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>7</u>	<u>274</u>	<u>.06</u>	<u>7</u>	<u>519</u>	<u>.06</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 21 July 64 Total Minutes: 792 Total Miles 122

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>24</u>	<u>286</u>	<u>5.22</u>	<u>1.69</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>20</u>	<u>6</u>	<u>17</u>	<u>3</u>	<u>67</u>	<u>16</u>	<u>31</u>	<u>3</u>	<u>2.3</u>	<u>2.67</u>	<u>1.82</u>	<u>1.00</u>	<u>.55</u>	<u>.13</u>	<u>.25</u>	<u>.03</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>2</u>	<u>2</u>	<u>-</u>	<u>2</u>	<u>2</u>	<u>-</u>	<u>1.0</u>	<u>1.0</u>	<u>-</u>	<u>.02</u>	<u>.02</u>	<u>-</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>8</u>	<u>135</u>	<u>16.88</u>	<u>1.11</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>2</u>	<u>2</u>	<u>1.0</u>	<u>.02</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>5</u>	<u>121</u>	<u>.04</u>	<u>1</u>	<u>87</u>	<u>.01</u>

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 22 July 64 Total Minutes: 783 Total Miles 130

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>62</u>	<u>427</u>	<u>6.89</u>	<u>3.28</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>55</u>	<u>9</u>	<u>53</u>	<u>-</u>	<u>152</u>	<u>17</u>	<u>131</u>	<u>-</u>	<u>2.73</u>	<u>1.59</u>	<u>2.57</u>	<u>-</u>	<u>1.15</u>	<u>.13</u>	<u>1.01</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>2</u>	<u>1</u>	<u>1</u>	<u>3</u>	<u>1</u>	<u>2</u>	<u>1.50</u>	<u>1.00</u>	<u>2.00</u>	<u>.02</u>	<u>.01</u>	<u>.02</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>11</u>	<u>273</u>	<u>24.82</u>	<u>2.10</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>1.00</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>.01</u>	<u>-</u>	<u>-</u>	<u>-</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>12</u>	<u>348</u>	<u>.09</u>	<u>9</u>	<u>325</u>	<u>.07</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 23 July 64 Total Minutes: 770 Total Miles 141

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>37</u>	<u>138</u>	<u>3.73</u>	<u>.98</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>35</u>	<u>4</u>	<u>31</u>	<u>-</u>	<u>55</u>	<u>7</u>	<u>47</u>	<u>-</u>	<u>1.57</u>	<u>1.75</u>	<u>1.52</u>	<u>-</u>	<u>.39</u>	<u>.05</u>	<u>.33</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>4</u>	<u>83</u>	<u>20.75</u>	<u>.57</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
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VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
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VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>3</u>	<u>89</u>	<u>.07</u>	<u>2</u>	<u>84</u>	<u>.01</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 24 July 64 Total Minutes: 953 Total Miles 138

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>37</u>	<u>57</u>	<u>1.54</u>	<u>.41</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>35</u>	<u>15</u>	<u>20</u>	<u>-</u>	<u>49</u>	<u>17</u>	<u>27</u>	<u>-</u>	<u>1.40</u>	<u>1.13</u>	<u>1.35</u>	<u>-</u>	<u>.36</u>	<u>.12</u>	<u>.20</u>	<u>-</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>11</u>	<u>8</u>	<u>2.00</u>	<u>.06</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>2</u>	<u>18</u>	<u>.01</u>	<u>1</u>	<u>13</u>	<u>.01</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 25 July 64

Total Minutes: 763

Total Miles 120

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>59</u>	<u>204</u>	<u>3.46</u>	<u>1.70</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>59</u>	<u>11</u>	<u>42</u>	<u>1</u>	<u>194</u>	<u>51</u>	<u>13</u>	<u>1</u>	<u>3.29</u>	<u>4.64</u>	<u>2.12</u>	<u>.00</u>	<u>1.62</u>	<u>.43</u>	<u>1.09</u>	<u>.01</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<hr/>											

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>2</u>	<u>10</u>	<u>5.00</u>	<u>.08</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<hr/>			

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
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VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
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VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>2</u>	<u>120</u>	<u>.02</u>	<u>2</u>	<u>120</u>	<u>.02</u>

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 26 July 64 Total Minutes: 773 Total Miles 125

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>23</u>	<u>27</u>	<u>1.17</u>	<u>.22</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>22</u>	<u>2</u>	<u>14</u>	<u>0</u>	<u>23</u>	<u>2</u>	<u>15</u>	<u>0</u>	<u>1.05</u>	<u>1.40</u>	<u>1.07</u>	<u>0</u>	<u>.18</u>	<u>.02</u>	<u>.12</u>	<u>0</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
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IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>4</u>	<u>4.00</u>	<u>.03</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<hr/>			

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
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VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
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VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 27 July 64

Total Minutes: 785

Total Miles 126

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>25</u>	<u>37</u>	<u>1.48</u>	<u>.29</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>23</u>	<u>0</u>	<u>19</u>	<u>0</u>	<u>35</u>	<u>0</u>	<u>31</u>	<u>0</u>	<u>1.52</u>	<u>0</u>	<u>1.63</u>	<u>0</u>	<u>.28</u>	<u>0</u>	<u>.25</u>	<u>0</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>1</u>	<u>1</u>	<u>0</u>	<u>1</u>	<u>1</u>	<u>0</u>	<u>1.00</u>	<u>1.00</u>	<u>0</u>	<u>.01</u>	<u>.01</u>	<u>0</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>1</u>	<u>1.00</u>	<u>.01</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/Mi.
<u>1</u>	<u>5</u>	<u>.01</u>	<u>1</u>	<u>5</u>	<u>.01</u>

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 28 July 64 Total Minutes: 797 Total Miles 144

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
23	147	6.39	1.62

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
19	0	14	0	74	0	64	0	3.89	0	4.57	0	.51	0	.44	0

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
3	2	1	3	2	1	1.00	1.00	1.00	.52	.01	.01

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
4	70	17.50	.49

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
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VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
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VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
5	126	.03	3	114	.02

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 27 July 64

Total Minutes: 814

Total Miles 159

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>14</u>	<u>217</u>	<u>15.50</u>	<u>1.36</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>7</u>	<u>0</u>	<u>3</u>	<u>1</u>	<u>57</u>	<u>0</u>	<u>5</u>	<u>1</u>	<u>8.14</u>	<u>0</u>	<u>1.67</u>	<u>1.00</u>	<u>.36</u>	<u>.03</u>	<u>.01</u>	

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>4</u>	<u>3</u>	<u>1</u>	<u>4</u>	<u>3</u>	<u>1</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>.03</u>	<u>.02</u>	<u>.01</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>4</u>	<u>156</u>	<u>39.00</u>	<u>1.98</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>1</u>	<u>200</u>	<u>.01</u>	<u>1</u>	<u>200</u>	<u>.01</u>

SI-MNH-955a
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 30 July 64 Total Minutes: Total Miles 89

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>13</u>	<u>17</u>	<u>1.31</u>	<u>.19</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>5</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>5</u>	<u>1</u>	<u>2</u>		<u>1</u>	<u>-</u>	<u>1</u>	<u>1</u>	<u>.06</u>	<u>.01</u>	<u>.02</u>	

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>6</u>	<u>3</u>	<u>2</u>	<u>6</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>.07</u>	<u>.03</u>	<u>.02</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>1</u>	<u>5</u>	<u>5.00</u>	<u>.06</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u> </u>	<u> </u>	<u> </u>	<u> </u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u> </u>	<u> </u>	<u> </u>	<u> </u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>1</u>	<u>5</u>	<u>.01</u>	<u>-</u>	<u> </u>	<u> </u>

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 31 July 64 Total Minutes: 800 Total Miles 412

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>22</u>	<u>81</u>	<u>3.68</u>	<u>.57</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>16</u>	<u>5</u>	<u>2</u>	<u>1</u>	<u>31</u>	<u>11</u>	<u>2</u>	<u>1</u>	<u>1.94</u>	<u>2.20</u>	<u>1</u>	<u>1</u>	<u>.22</u>	<u>.08</u>	<u>.01</u>	<u>.01</u>

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>3</u>	<u>2</u>	<u>1</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>.02</u>	<u>.01</u>	<u>.01</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>5</u>	<u>43</u>	<u>8.60</u>	<u>.30</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>3</u>	<u>4</u>	<u>1.33</u>	<u>.03</u>

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>3</u>	<u>58</u>	<u>.02</u>	<u>3</u>	<u>58</u>	<u>.02</u>

SI-MNH-955a
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART A

DATE: 1 August 64 Total Minutes: 300 Total Miles 68

I. Total Abundance of birds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>123</u>	<u>368</u>	<u>2.99</u>	<u>5.41</u>

II. Abundance of the Shearwater-Petrel-Albatross Group:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	WT	P	B	T	WT	P	B	T	WT	P	B	T	WT	P	B
<u>52</u>	<u>49</u>	<u>0</u>	<u>6</u>	<u>100</u>	<u>89</u>	<u>0</u>	<u>6</u>	<u>1.91</u>	<u>1.82</u>	<u>0</u>	<u>1.00</u>	<u>1.47</u>	<u>1.31</u>	<u>0.09</u>	

III. Abundance of Tropicbirds:

No. Sightings			No. Birds			Birds/Sighting			Birds/Mile		
T	RT	WT	T	RT	WT	T	RT	WT	T	RT	WT
<u>3</u>	<u>2</u>	<u>1</u>	<u>3</u>	<u>2</u>	<u>1</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>.04</u>	<u>.03</u>	<u>.01</u>

IV. Abundance of Terns:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile
<u>75</u>	<u>258</u>	<u>3.44</u>	<u>3.79</u>

V. Abundance of Shorebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VI. Abundance of Boobys:

No. Sightings				No. Birds				Birds/Sighting				Birds/Mile			
T	BF	RF	B	T	BF	RF	B	T	BF	RF	B	T	BF	RF	B
<u>6</u>	<u>0</u>	<u>5</u>	<u>1</u>	<u>7</u>	<u>0</u>	<u>5</u>	<u>2</u>	<u>1.17</u>	<u>0</u>	<u>1.00</u>	<u>2.00</u>	<u>1.0</u>	<u>0</u>	<u>.07</u>	<u>.03</u>

VII. Abundance of Frigatebirds:

No. Sightings	No. Birds	Birds/Sighting	Birds/Mile

VIII. Abundance of Flocks:

Total No. Flocks	Total No. Birds	Total No. F/Mi.	No. Feeding Flocks	No. Feeding Birds	No. Feeding F/MI.
<u>4</u>	<u>138</u>	<u>.06</u>	<u>2</u>	<u>119</u>	<u>.02</u>

SI-MNH-955b
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE

13 July 64

Time at sunrise = ¹⁴⁰⁵ Position at sunrise = 21° 19' N 111° 28' W

Time at sunset = ¹⁹¹⁴ Position at sunset = 20° 09' N 111° 53' W

Miles traveled from 0000 hours to sunrise = 0

Miles traveled from sunrise to sunset = 51

Miles traveled from sunset to 2400 hours = 14

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

DATE

13 July 64

Time at sunrise = ⁰⁵⁵⁹ Position at sunrise = 17° 29' N 113° 19' W

Time at sunset = ⁷ Position at sunset = 17° 29' N 113° 00' W

Miles traveled from 0000 hours to sunrise = 39

Miles traveled from sunrise to sunset = 125

Miles traveled from sunset to 2400 hours = 51

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.				
2.				
3.				
4.				
5.				
6.				

SI-MNH-955b
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART B

DATE

15 July 64

Time at sunrise = ⁰⁶⁰⁵

Position at sunrise =

¹⁵ 23 27 156° 39' 31"

Time at sunset = ¹⁸⁵⁹

Position at sunset =

¹³ 08 12 157° 02' 60"

Miles traveled from 0000 hours to sunrise = 60

Miles traveled from sunrise to sunset = 145

Miles traveled from sunset to 2400 hours = 32

TIME OF FIX

TYPE OF FIX

LONGITUDE

LATITUDE

1.

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6.

DATE

16 July 64

Time at sunrise = ⁰⁶¹²

Position at sunrise =

¹¹ 01 12 157° 01' 12"

Time at sunset = ¹⁸¹²

Position at sunset =

¹³ 28 12 157° 11' 12"

Miles traveled from 0000 hours to sunrise = 65

Miles traveled from sunrise to sunset = 140

Miles traveled from sunset to 2400 hours = 55

TIME OF FIX

TYPE OF FIX

LONGITUDE

LATITUDE

1.

2.

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4.

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6.

SI-MNH-955b
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE

17 July 64

Time at sunrise = ⁰⁶⁰² Position at sunrise = $10^{\circ}55'N$ $153^{\circ}57'W$

Time at sunset = ¹⁸⁴⁶ Position at sunset = $12^{\circ}02'N$ $154^{\circ}04'W$

Miles traveled from 0000 hours to sunrise = 61

Miles traveled from sunrise to sunset = 127

Miles traveled from sunset to 2400 hours = 43

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
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1.

2.

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5.

6.

DATE

18 July 64

Time at sunrise = ⁰⁵⁵⁶ Position at sunrise = $14^{\circ}41'N$ $153^{\circ}54'W$

Time at sunset = ¹⁸⁵³ Position at sunset = $16^{\circ}58'N$ $154^{\circ}00'W$

Miles traveled from 0000 hours to sunrise = 56

Miles traveled from sunrise to sunset = 137

Miles traveled from sunset to 2400 hours = 38

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
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1.

2.

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6.

SI-MNH-955b
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE

19 July 64

Time at sunrise =

Position at sunrise =

⁰⁵⁴⁸ $18^{\circ}44'N$ $153^{\circ}59'W$

Time at sunset =

Position at sunset =

¹⁸⁵⁹ $20^{\circ}42'N$ $154^{\circ}01'W$

Miles traveled from 0000 hours to sunrise = 68

Miles traveled from sunrise to sunset = 118

Miles traveled from sunset to 2400 hours = 50

TIME OF FIX

TYPE OF FIX

LONGITUDE

LATITUDE

1.

2.

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4.

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6.

DATE

20 July 64

Time at sunrise =

Position at sunrise =

⁰⁵⁴³ $22^{\circ}27'N$ $153^{\circ}59'W$

Time at sunset =

Position at sunset =

¹⁸⁴⁷ $23^{\circ}31'N$ $152^{\circ}53'W$

Miles traveled from 0000 hours to sunrise = 55

Miles traveled from sunrise to sunset = 121

Miles traveled from sunset to 2400 hours = 43

TIME OF FIX

TYPE OF FIX

LONGITUDE

LATITUDE

1.

2.

3.

4.

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6.

SI-MNH-955b
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE 21 July 64

Time at sunrise = ⁰⁵²⁸ Position at sunrise = $23^{\circ}26'N$ $151^{\circ}06'W$

Time at sunset = ¹⁸⁴² Position at sunset = $21^{\circ}28'N$ $151^{\circ}01'W$

Miles traveled from 0000 hours to sunrise = 55

Miles traveled from sunrise to sunset = 122

Miles traveled from sunset to 2400 hours = 59

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
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1.

2.

3.

4.

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6.

DATE 22 July 64

Time at sunrise = ⁰⁵³⁷ Position at sunrise = $19^{\circ}35'N$ $150^{\circ}57'W$

Time at sunset = ¹⁸⁴⁰ Position at sunset = $17^{\circ}28'N$ $151^{\circ}01'W$

Miles traveled from 0000 hours to sunrise = 54

Miles traveled from sunrise to sunset = 00

Miles traveled from sunset to 2400 hours = 48

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
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1.

2.

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6.

SI-MNH-955b
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE

23 July 64

Time at sunrise =

0544

Position at sunrise =

15° 30' N 150° 57' W

Time at sunset =

1834

Position at sunset =

15° 14' N 151° 04' W

Miles traveled from 0000 hours to sunrise =

59

Miles traveled from sunrise to sunset =

147

Miles traveled from sunset to 2400 hours =

40

TIME OF FIX

TYPE OF FIX

LONGITUDE

LATITUDE

1.

2.

3.

4.

5.

6.

DATE

24 July 64

Time at sunrise =

0544

Position at sunrise =

11° 30' N 151° 30' W

Time at sunset =

1822

Position at sunset =

10° 30' N 148° 51' W

Miles traveled from 0000 hours to sunrise =

67

Miles traveled from sunrise to sunset =

138

Miles traveled from sunset to 2400 hours =

63

TIME OF FIX

TYPE OF FIX

LONGITUDE

LATITUDE

1.

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6.

SI-MNH-955b
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE

25 July 64

Time at sunrise = 0559

Position at sunrise = 10° 45' N 147° 54' W

Time at sunset = 1821

Position at sunset = 12° 45' N 145° 05' W

Miles traveled from 0000 hours to sunrise = 50

Miles traveled from sunrise to sunset = 120

Miles traveled from sunset to 2400 hours = 48

TIME OF FIX

TYPE OF FIX

LONGITUDE

LATITUDE

1.

2.

3.

4.

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6.

DATE

26 July 64

Time at sunrise = 0534

Position at sunrise = 10° 40' N 146° 27' W

Time at sunset = 1827

Position at sunset = 12° 45' N 145° 20' W

Miles traveled from 0000 hours to sunrise = 46

Miles traveled from sunrise to sunset = 125

Miles traveled from sunset to 2400 hours = 45

TIME OF FIX

TYPE OF FIX

LONGITUDE

LATITUDE

1.

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6.

SI-MNH-955b
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE

27 July 1964

Time at sunrise = ^{5:27}

Position at sunrise = ^{18° 36' N} ^{149° 52' W}

Time at sunset = ^{18:12}

Position at sunset = ^{22° 45' N} ^{149° 52' W}

Miles traveled from 0000 hours to sunrise = ⁶⁰

Miles traveled from sunrise to sunset = ¹³²

Miles traveled from sunset to 2400 hours = ⁸²

TIME OF FIX

TYPE OF FIX

LONGITUDE

LATITUDE

1.

2.

3.

4.

5.

6.

DATE

28 July 64

Time at sunrise = ^{5:12}

Position at sunrise = ^{22° 22' N} ^{147° 42' W}

Time at sunset = ^{18:39}

Position at sunset = ^{24° 52' N} ^{148° 00' W}

Miles traveled from 0000 hours to sunrise = ⁴⁶

Miles traveled from sunrise to sunset = ¹⁴⁴

Miles traveled from sunset to 2400 hours = ⁴⁰

TIME OF FIX

TYPE OF FIX

LONGITUDE

LATITUDE

1.

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SI-MNH-955b
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE 29 July 64

Time at sunrise = ⁰⁵¹⁵ Position at sunrise = $22^{\circ} 20' N$ $152^{\circ} 52' W$

Time at sunset = ¹⁸⁴⁹ Position at sunset = $25^{\circ} 16' N$ $150^{\circ} 33' W$

Miles traveled from 0000 hours to sunrise = 80

Miles traveled from sunrise to sunset = 159

Miles traveled from sunset to 2400 hours = 41

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
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1.

2.

3.

4.

5.

6.

DATE 30 July 64

Time at sunrise = ⁰⁵³⁵ Position at sunrise = $24^{\circ} 58' N$ $152^{\circ} 34' W$

Time at sunset = ¹⁹⁰³ Position at sunset = $25^{\circ} 40' N$ $150^{\circ} 50' W$

Miles traveled from 0000 hours to sunrise = 63

Miles traveled from sunrise to sunset = 89

Miles traveled from sunset to 2400 hours = 38

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
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1.

2.

3.

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6.

SI-MNH-955b
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS

AT SEA SURVEY CHART B

DATE

Time at sunrise = 0550 Position at sunrise = 25° 00' N 151° 22' W
Time at sunset = 1710 Position at sunset = 23° 30' N 157° 07' W
Miles traveled from 0000 hours to sunrise = 73
Miles traveled from sunrise to sunset = 142
Miles traveled from sunset to 2400 hours = 39

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
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1.

2.

3.

4.

5.

6.

DATE

Time at sunrise = 0600 Position at sunrise = 21° 55' N 157° 04' W
Time at sunset = 1100 Position at sunset = 21° 19' N 157° 58' W
Miles traveled from 0000 hours to sunrise = 58
Miles traveled from sunrise to sunset = 68
Miles traveled from sunset to 2400 hours =

TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
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1.

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3.

4.

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SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 13 July 64

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100																
0200																
0300																
0400																
0500																
0600																
0700																
0800																
0900																
1000																
1100																
1200																
1300																
1400	21 19	157 58														
1500	21 13	157 54														
1600	21 03	157 47														
1700	20 53	157 39														
1800	20 43	157 31														
1900	20 37	157 24														
2000	20 35	157 30														
2100	20 35	157 30														
2200	20 34	157 25														
2300	20 34	157 17														
2400	20 34	157 17														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

71 099

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 14 July 64

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	20 24	157 12														
0200	20 14	157 06														
0300	20 03	157 01														
0400	19 52	157 00														
0500	19 41	156 59														
0600	19 29	156 58														
0700	19 17	156 58														
0800	19 05	156 57	14		25	1019.2	24.6	21	81	6		10-5-5	25.3	15	80	5-12
0900	19 00	156 58														
1000	18 57	156 58														
1100	18 46	156 59														
1200	18 35	157 00														
1300	18 23	157 00														
1400	18 11	157 00	01		25	1017.3	24.3	21	77	6		10-5-5	25.3	20	100	5-12
1500	18 00	157 01														
1600	17 47	157 00														
1700	17 34	157 00														
1800	17 30	157 00														
1900	17 25	157 00														
2000	17 14	156 59	01		10	1017.0	25.2	21	77	5		10-5-5	25.6	19	20	5-12
2100	17 09	156 59														
2200	16 57	156 59														
2300	16 45	156 59														
2400	16 33	156 59														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 15 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	16 20	156 59													
0200	16 08	156 59	01	10	1016.2	23.1	21	77	2	-	70-5-5	25.6	20	70	S-12
0300	15 56	156 59													
0400	15 56	156 59													
0500	15 47	156 59													
0600	15 34	156 59													
0700	15 21	156 59													
0800	15 07	156 59	02	10	1017.1	25.0	26	100	6	-	50-5-5	25.5	20	70	S-12
0900	14 54	156 59													
1000	14 40	156 59													
1100	14 26	156 59													
1200	14 25	156 59													
1300	14 21	156 59													
1400	14 07	156 59	01	10	1015.1	26.2	22	77	4	-	70-5-5	25.5	16	50	S-12
1500	13 55	157 00													
1600	13 43	157 00													
1700	13 32	157 01													
1800	13 20	157 01													
1900	13 08	157 02													
2000	13 05	157 02	01	10	1015.0	26.3	22	77	4	-	70-5-5	25.7	18	70	S-12
2100	13 05	157 02													
2200	13 00	157 02													
2300	12 48	157 02													
2400	12 36	157 01													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 16 July 64

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	12 24	157 01														
0200	12 12	157 01	00		10	1015.0	26.0	23	83	9		10-5-5	265	18	70	1-12
0300	12 00	157 01														
0400	11 49	157 01														
0500	11 37	157 01														
0600	11 31	157 01														
0700	11 29	156 59														
0800	11 23	156 49	14		25	1013.5	25.7	23	84	6		10-5-3	266	6	110	3-12
0900	11 17	156 38														
1000	11 13	156 27														
1100	11 10	156 16														
1200	11 04	156 05														
1300	10 59	155 54														
1400	10 54	155 43	51		10	1012.0	25.9	21	75	8		10-5-2	267	12	130	SE-12
1500	10 48	155 32														
1600	10 43	155 21														
1700	10 37	155 11														
1800	10 32	155 01														
1900	10 26	154 52														
2000	10 21	154 42	50		1	1014.6	24.0	24	94	5		10-5-3	267	15	110	SE-12
2100	10 18	154 38														
2200	10 13	154 27														
2300	10 07	154 15														
2400	10 02	154 04														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 17 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	10 00	153 57													
0200	10 02	153 57	02	10	1012.0	266	23	83	8	-	30-3-7	265	11	120	SE 12
0300	10 15	153 57													
0400	10 29	153 57													
0500	10 42	153 57													
0600	10 55	153 57													
0700	11 08	153 58													
0800	11 19	153 59	02	10	1013.1	265	23	80	6	-	10-2-3	268	16	90	NW 12
0900	11 30	154 00													
1000	11 33	154 00													
1100	11 33	154 00													
1200	11 39	154 00													
1300	11 51	154 00													
1400	12 03	154 02	02	10	1011.6	261	24	84	6	-	30-5-3	268	12	90	N 12
1500	12 15	154 03													
1600	12 28	154 04													
1700	12 41	154 04													
1800	12 54	154 04													
1900	13 04	154 04													
2000	13 04	154 04	01	10	1014.0	261	23	82	2	-	30-5-2	263	18	90	N 12
2100	13 08	154 04													
2200	13 20	154 03													
2300	13 33	154 01													
2400	13 45	153 59													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 18 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	13 57	153 57													
0200	14 09	153 56	02	10	1014.0	269	21	70	3		30-5-1/2	26.4	16	70	N-12
0300	14 22	153 55													
0400	14 27	153 54													
0500	14 30	153 54													
0600	14 42	153 54													
0700	14 53	153 55													
0800	15 05	153 56	02	10	1015.0	258	21	75	4		30-5-1	26.0	17	70	N-12
0900	15 17	153 57													
1000	15 30	153 58													
1100	15 42	153 59													
1200	15 55	154 00													
1300	16 00	154 01													
1400	16 00	154 01	02	25	1014.5	259	22	78	2		50-5-1	26.5	15	70	N-12
1500	16 11	154 00													
1600	16 23	153 59													
1700	16 35	153 57													
1800	16 47	154 00													
1900	16 59	154 00													
2000	17 10	154 00	02	15	1016.1	251	22	93	2		40-5-1/2	25.4	15	70	N-12
2100	17 15	154 00													
2200	17 28	153 59													
2300	17 30	153 59													
2400	17 36	153 59													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 19 July 64

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	17 47	153 59														
0200	17 58	153 58	02		10	1015.6	249	21	78	3		10-5-1/2	261	19	60	N-12
0300	18 10	153 58														
0400	18 22	153 58														
0500	18 34	153 58														
0600	18 46	153 59														
0700	18 58	153 59														
0800	18 59	153 59	03		5	1017.5	239	21	83	8		10-5-1	249	7	60	N-12
0900	19 06	153 59														
1000	19 17	154 00														
1100	19 28	154 02														
1200	19 38	154 02														
1300	19 50	154 02														
1400	20 01	154 02	03		10	1017.9	261	20	77	8		50-5-1	252	21	60	N-12
1500	20 11	154 02														
1600	20 21	154 02														
1700	20 28	154 02														
1800	20 28	154 02														
1900	20 42	154 01														
2000	20 56	154 01	03		5	1018.6	241	22	87	5		20-5-1	251	24	60	N-12
2100	21 01	154 00														
2200	21 13	154 00														
2300	21 25	154 00														
2400	21 32	154 00														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 20 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	21 46	154 00													
0200	21 59	153 59	02	5	1013.5	24.5	19	67	67		70-5-1	24.4	25	70	N-12
0300	21 59	153 59													
0400	22 08	153 59													
0500	22 19	153 59													
0600	22 30	153 58													
0700	22 42	153 58													
0800	22 54	153 57	52	10	1020.3	24.0	21	83	07		70-5-1.5	24.9	21	70	N-12
0900	23 07	153 57													
1000	23 20	153 56													
1100	23 32	153 55													
1200	23 32	153 55													
1300	23 32	153 51													
1400	23 32	153 40	03	10	1025.7	25.0	20	74	67		70-6-2	24.9	16	70	E-12
1500	23 32	153 30													
1600	23 31	153 21													
1700	23 31	153 11													
1800	23 31	153 02													
1900	23 31	152 51													
2000	23 31	152 43	01	10	1019.5	24.1	20	77	07		70-6-2	24.6	18	70	E-12
2100	23 31	152 38													
2200	23 30	152 28													
2300	23 29	152 17													
2400	23 29	152 06													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 21 July 64

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	23 28	151 56														
0200	23 27	151 44	25		5	1019.1	229	20	83	8		50-6-2	244	13	50	E-12
0300	23 26	151 32														
0400	23 26	151 22														
0500	23 25	151 12														
0600	23 27	150 59														
0700	23 27	150 59														
0800	23 23	150 59	25		10	1020.1	239	21	83	5		40-6-2	244	11	22	S-12
0900	23 10	150 52														
1000	22 56	150 58														
1100	22 44	150 58														
1200	22 31	150 58														
1300	22 20	150 55														
1400	22 09	150 54	03		5	1016.6	239	23	91	7		40-6-2	244	15	110	S-12
1500	21 58	150 54														
1600	21 58	150 59														
1700	21 47	151 00														
1800	21 36	151 01														
1900	21 24	151 01														
2000	21 12	151 01	25		5	1017.5	244	22	86	8		50-5-1.5	244	18	20	S-12
2100	21 03	151 01														
2200	20 51	151 00														
2300	20 37	150 59														
2400	20 29	150 59														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION

DIVISION OF BIRDS

AT SEA SURVEY CHART C

DATE

22 July 64

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	20 29	150 59														
0200	20 16	150 58	50		5	1015.4	240	22	88	4		30 S-1	249	13	20	S-12
0300	20 05	150 58														
0400	19 54	150 58														
0500	19 43	150 57														
0600	19 30	150 57														
0700	19 18	150 58														
0800	19 06	150 58	16		5	1015.2	243	22	86	6		50 S-1/2	249	06	50	S-12
0900	18 58	150 58														
1000	18 58	150 59														
1100	18 48	150 59														
1200	18 37	150 59														
1300	18 24	150 59														
1400	18 12	150 59	01		25	1014.3	260	23	93	3		30 S-1/2	255	01	26	S-12
1500	18 01	150 59														
1600	17 49	151 00														
1700	17 37	151 00														
1800	17 25	151 01														
1900	17 25	151 01														
2000	17 18	151 01	02		10	1014.1	250	22	82	4		100 S-1	258	06	100	S-12
2100	17 13	151 00														
2200	17 01	151 00														
2300	16 49	151 00														
2400	16 37	151 00														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 23 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	16 25	150 59													
0200	16 12	150 59	02	—	1015.0	26.0	22	83	12		100-6-3	26.0	7	100	S-12
0300	15 59	150 58													
0400	15 59	150 58													
0500	15 47	150 57													
0600	15 34	150 58													
0700	15 4	150 58													
0800	15 07	150 58	02	10	1014.6	26.0	22	78	11		100-5-2	26.2	13	100	S-12
0900	14 51	150 58													
1000	14 48	150 59													
1100	14 35	150 59													
1200	14 27	150 59													
1300	14 27	151 00													
1400	14 15	151 00	15	10	1014.2	26.2	22	77	6		100-5-2	26.4	16	100	S-12
1500	14 02	151 01													
1600	13 50	151 02													
1700	13 37	151 04													
1800	13 24	151 05													
1900	13 13	151 06													
2000	13 02	151 03	02	10	1013.5	26.5	22	80	1		100-5-2	26.8	13	100	S-12
2100	13 01	151 03													
2200	13 00	151 02													
2300	12 50	151 02													
2400	12 37	151 02													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 24 July 64

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	12 25	151 02														
0200	12 13	151 02	02		10	1014.2	26.3	24	86	1		60-63	26.9	16	60	S-12
0300	12 01	151 02														
0400	11 48	151 01														
0500	11 35	151 01														
0600	11 30	151 00														
0700	11 29	150 56														
0800	11 24	150 46	11		10	1013.6	27.2	24	82	6		60-63	27.1	17	60	S-12
0900	11 20	150 35														
1000	11 15	150 24														
1100	11 10	150 14														
1200	11 05	150 03														
1300	11 00	149 51														
1400	10 55	149 42	03		10	1013.1	27.4	24	81	7		60-63	27.2	16	60	SE-12
1500	10 50	149 30														
1600	10 44	149 18														
1700	10 30	149 07														
1800	10 32	148 56														
1900	10 26	148 45														
2000	10 21	148 34	01		10	1015.1	26.6	23	80	4		40-5.3	27.2	6	60	E-12
2100	10 19	148 30														
2200	10 12	148 19														
2300	10 05	148 08														
2400	09 50	147 56														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 25 July 64

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	10 26	147 56														
0200	10 29	147 56	16		10	1015.0	260	23	83	4		110-5-3	270	07	110	N-12
0300	10 18	147 56														
0400	10 30	147 55														
0500	10 46	147 54														
0600	10 52	147 54														
0700	11 02	147 55														
0800	11 11	147 55	18		1/4	1015.8	248	23	90	8		110-5-3	268	08	100	N-12
0900	11 21	147 55														
1000	11 25	147 57														
1100	11 29	147 58														
1200	11 40	147 59														
1300	11 51	148 01														
1400	12 01	148 01	14		5	1014.9	269	25	88	2		410-5-3	269	13	90	N-12
1500	12 12	148 02														
1600	12 22	148 03														
1700	12 33	148 04														
1800	12 44	148 05														
1900	12 55	148 06														
2000	12 59	148 06	14		5	1015.7	263	22	97	3		40-6-5	268	19	90	N-12
2100	12 59	148 06														
2200	13 08	148 06														
2300	13 21	148 06														
2400	13 34	148 06														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 26 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	13 47	148 06													
0200	14 50	148 07	03	10	1014.3	255	21	76	6		50-6-5	262	17	60	N-12
0300	14 12	148 07													
0400	14 24	148 07													
0500	14 36	148 09													
0600	14 40	148 07													
0700	14 43	148 06													
0800	14 55	148 05	02	10	1014.3	251	21	77	7		50-5-5	256	20	70	N-12
0900	15 07	148 04													
1000	15 19	148 03													
1100	15 31	148 01													
1200	15 47	147 59													
1300	15 55	147 58													
1400	16 09	147 56	01	10	1014.5	256	20	71	2		50-5-5	261	18	60	N-12
1500	16 23	147 55													
1600	16 35	147 58													
1700	16 28	147 56													
1800	16 45	147 56													
1900	16 52	147 57													
2000	17 03	147 56	02	5	1014.6	247	22	84	2		50-5-8	260	21	60	N-12
2100	17 10	147 55													
2200	17 21	147 58													
2300	17 30	147 57													
2400	17 30	147 58													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 27 June 64

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	17 42	147 52														
0200	17 55	147 54	03		5	1015.1	240	20	78	7		50-6-5	252	17	60	N-12
0300	18 07	147 58														
0400	18 19	147 59														
0500	18 31	147 59														
0600	18 43	148 00														
0700	18 56	148 00														
0800	19 02	148 00	02		10	1016.2	252	21	77	3		50-5-5	252	17	70	N-12
0900	19 03	148 00														
1000	19 15	148 01														
1100	19 27	148 01														
1200	19 45	148 01														
1300	19 52	148 00														
1400	20 03	148 00	02		10	1014.7	245	23	77	6		50-5-5	254	21	50	N-12
1500	20 15	147 59														
1600	20 27	147 58														
1700	20 29	147 58														
1800	20 36	147 58														
1900	20 49	147 58														
2000	21 01	147 58	50		5	1013.0	243	20	77	7		50-5-5	248	19	50	N-12
2100	21 07	147 58														
2200	21 19	147 57														
2300	21 30	147 57														
2400	21 42	147 57														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 28 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	21 54	147 57													
0200	22 01	147 57	02	5	1016.7	23.5	18	71	8		50-5-5	73.9	20	70	N-2
0300	22 03	147 57													
0400	22 12	147 57													
0500	22 24	147 56													
0600	22 36	147 56													
0700	22 45	147 56													
0800	23 01	147 56	14	10	1019.2	23.8	18	70	8		60-5-5	24.0	20	70	N-12
0900	23 17	147 56													
1000	23 25	147 57													
1100	23 31	147 57													
1200	23 33	147 57													
1300	23 45	147 58													
1400	23 57	147 58	14	10	1019.5	23.1	21	93	7		50-5-5	24.0	22	80	N-12
1500	24 08	148 00													
1600	24 20	148 00													
1700	24 32	148 01													
1800	24 44	148 00													
1900	24 55	148 00													
2000	25 07	148 00	63	5	1021.2	23.2	18	73	8		60-5-5	24.1	24	80	N-12
2100	25 00	148 00													
2200	25 17	148 00													
2300	25 20	148 00													
2400	25 32	147 59													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 29 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	25 23	147 59													
0200	25 52	147 59	01	5	1026.8	229	19	78	6		60-6-5	232	6	60	N-12
0300	26 03	147 59													
0400	26 18	147 59													
0500	26 26	147 59													
0600	26 28	148 05													
0700	26 28	148 05													
0800	26 28	148 18	03	10	1024.7	225	20	85	7		60-6-5	232	7	50	SW-12
0900	26 18	148 30													
1000	26 10	148 43													
1100	26 04	148 53													
1200	25 57	149 08													
1300	25 50	149 21													
1400	25 44	149 34	02	10	1023.1	260	20	70	6		60-6-5	238	6	10	SW-12
1500	25 38	149 47													
1600	25 30	149 59													
1700	25 26	150 11													
1800	25 20	150 23													
1900	25 15	150 35													
2000	25 09	150 45	03	10	1022.9	240	20	78	6		60-6-3	244	6	60	SW-12
2100	25 05	150 51													
2200	25 00	151 08													
2300	25 00	151 20													
2400	25 00	151 14													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 30 July 64

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	24 59	151 28													
0200	24 59	151 41	02	10	1021.3	23.5	19		3		50-6-3	24.7	16	50	W-12
0300	24 59	151 55													
0400	24 59	152 06													
0500	24 58	152 17													
0600	24 58	152 30													
0700	24 59	152 43													
0800	24 59	152 58	01	10	1020.5	23.7	18		3		50-6-3	24.4	15	30	W-12
0900	24 59	153 06													
1000	24 59	153 11													
1100	24 59	153 28													
1200	24 59	153 51													
1300	24 59	154 09													
1400	24 59	154 26	02	10	1020.9	24.0	19		4		50-6-3	24.1	19	90	W-12
1500	25 00	154 38													
1600	25 00	154 51													
1700	25 00	155 04													
1800	25 00	155 17													
1900	25 00	155 31													
2000	25 00	155 41	03	10	1020.2	24.0	20		4		50-1-2	25.1	18	60	W-12
2100	25 00	155 53													
2200	25 00	156 05													
2300	25 00	156 19													
2400	25 00	156 31													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 31 July 64

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	15 00	154 55														
0200	15 00	155 00	01		10	1020.5	240	19		5		50-5-3	246	15	90	W-15
0300	15 00	155 24														
0400	15 00	155 38														
0500	15 00	155 42														
0600	15 00	156 04														
0700	15 00	156 15														
0800	15 00	156 29	07		10	1020.2	240	20		4		50-1-3	246	32	180	W-12
0900	15 00	156 41														
1000	15 00	156 56														
1100	15 00	157 06														
1200	15 00	157 20														
1300	15 00	157 31														
1400	15 00	157 42	01		10	1019.5	247	21		3		50-6-3	252	16	90	S-12
1500	15 00	157 53														
1600	15 00	158 04														
1700	15 00	158 15														
1800	15 00	158 26														
1900	15 00	158 37														
2000	15 00	158 48	02		10	1018.6	252	20		3		50-5-2	256	14	90	S-12
2100	15 00	158 59														
2200	23 16	156 59														
2300	23 04	156 58														
2400	22 52	156 59														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955c
3-4-64

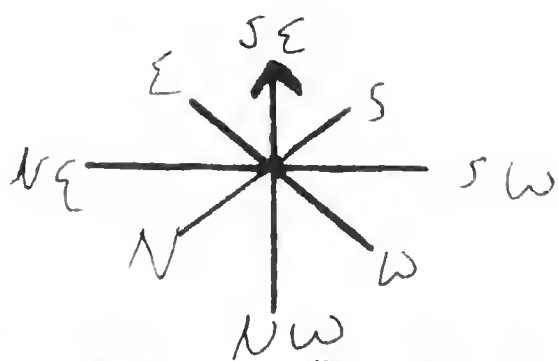
SMITHSONIAN INSTITUTION
DIVISION OF BIRDS
AT SEA SURVEY CHART C

DATE 1 Aug 64

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUM %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	22 29	157 01														
0200	22 27	157 00														
0300	22 14	156 59														
0400	22 02	156 58														
0500	22 00	157 00														
0600	21 54	157 02														
0700	21 41	157 10														
0800	21 32	157 19														
0900	21 24	157 28														
1000	21 16	157 36														
1100	21 14	157 49														
1200	21 18	157 53														
1300																
1400																
1500																
1600																
1700																
1800																
1900																
2000																
2100																
2200																
2300																
2400																

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS



DATE 13 July 64
Pg. # 1

time species # dir. hgt. remarks loc.

1400 begin observations

1426 Wedgetail 1 SW Light

1435 Wedgetail 3 SE light

1445 Sooty Tern 2 E light

1451 Wedgetail 1 SE

1456 Bulwers P 1 SW light

1457 Wedgetail 2 SE

1510 Sooty Tern 3 NE

1512 Sooty Tern 3 NE

1531 Sooty Tern 1 SW

1533 Noddy Tern 2 E

1542 Sooty Tern 2 SW

1550 Sooty Tern 15 ± 25 feeding flock

Red-footed Booby 2 1 adult, 1 sub adult - sat on water

Bulwers P 1

1555 Sooty Tern 2 SW

1559 Sooty Tern 1 SW

1600 Sooty Tern 2 SE

1605 Sooty Tern 1 SW

1610 Sooty Tern 1 SW

1611 Bulwers P 1 SE

1620 Sooty Tern 1 NE

1651 Sooty Tern 1 SE

1652 Bulwers P 1 E

1656 Great Frigate 1 E

1705 Sooty Tern 1 SE

1719 Wedgetail 1 E Light

1723 Wedgetail 1 S Light

1724 Petrel Shear 1 NE Seemingly rook

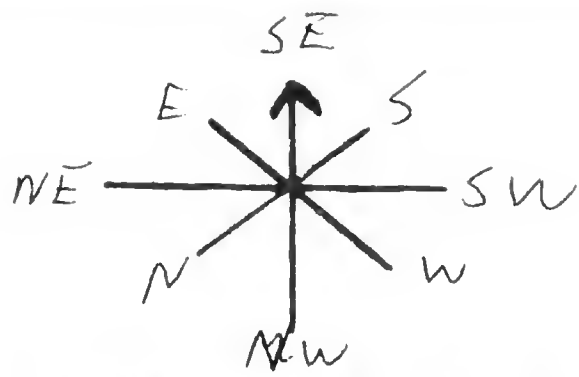
1728 Red-footed Booby 7 E moving together flock, may have been traveling together

Wedgetails 2 SE

1733 Red-footed Booby 1 NE

7
32
11
77
1.69
648

944



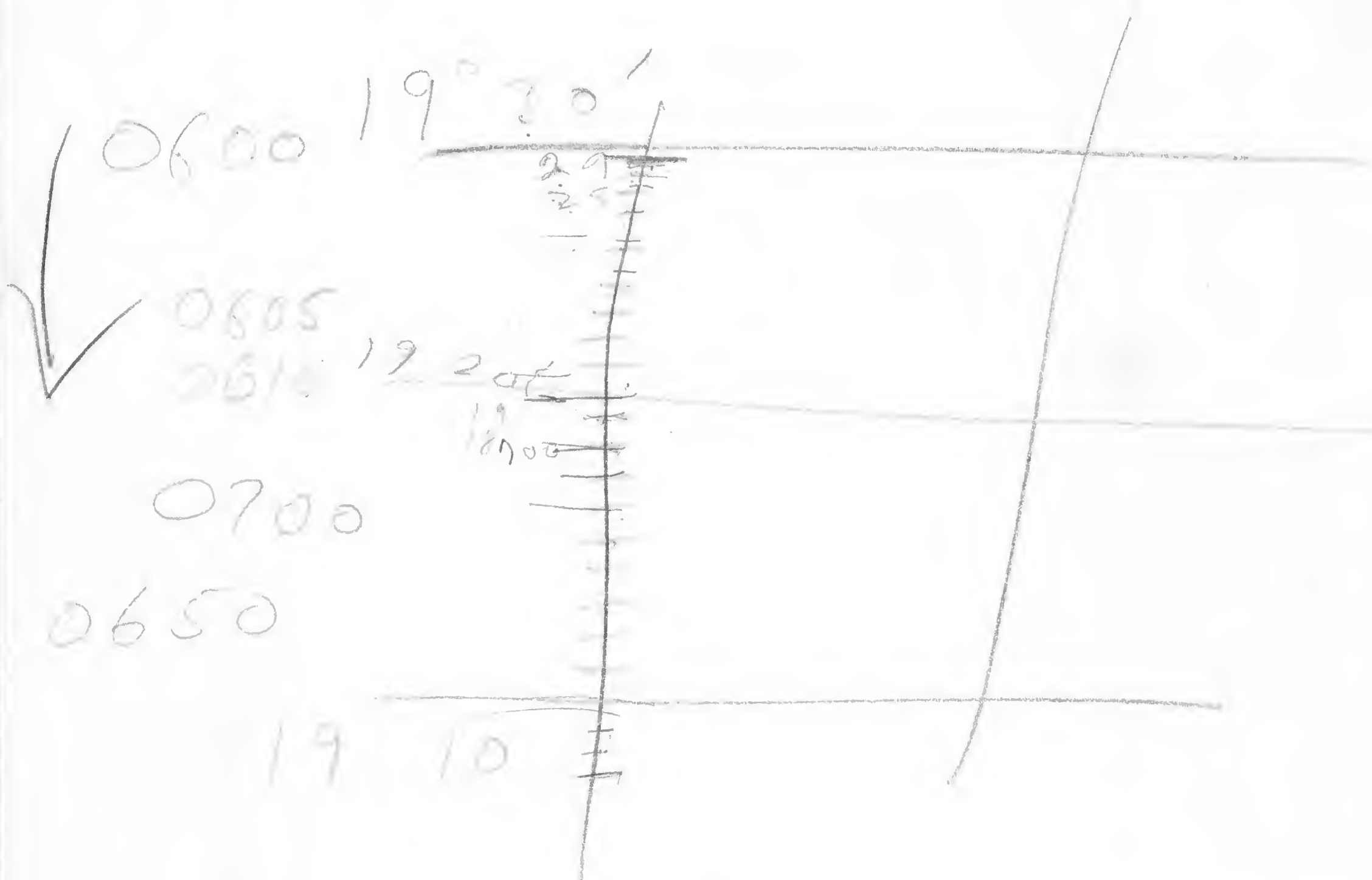
DATE 13 July 1964
Pg. # 2

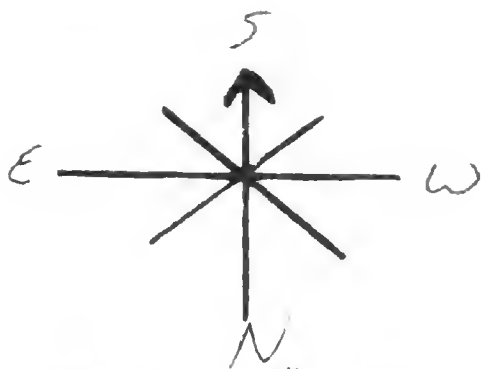
time	species	#	dir.	hgt.	remarks	loc.
1742	Wedgetail	2	SE		light	
1750	Bonin Is P.	1	S			
1755	Sooty Tern	250	SE			
	Noddy Tern	75	SE			
	Wedgetail	75	SE		feeding flock	
	Dark-rumped P.	3+				
	Red-footed Booby	1				
1800	Sooty Tern	75	SE		feeding flock	
	Fairy Tern	1				
	Wedgetail	2+				
1805	Sooty Tern	250	SE		feeding flock	
	Wedgetail	75	SE			
1815	Bulwer's P.	2	NE			
	Sooty Tern	1				
1817	Bulwer's P.	2	NE			
1820	Bulwer's P.	2	NE			
1825	Bulwers P	4	NE		Area affected by 2 tides converging - small chop	
1826	Sooty Tern	35				
1827	Bulwers P.	3	NE		feeding travelling	
1830	Wedgetail	1	NE		light	
	Bulwers P	2	NE			
1831	Bulwers P	1	NE			
1832	Bulwers P	3	NE			
1836	Bulwers P	1	NE			
1838	Bulwers P	2	NE			
1840	Wedgetail	1				
1841	Bulwers P	3	NE			
1843	Bulwers P	2	NE			
1852	Bulwers P	1	NE			
1909	Wedgetail	1	NE		Light	
1916	Sooty Tern	1	W			
1920	Wedgetail S	1	SE		Light	
1925	End Observations					

A // Bulwers heading toward Lanai

1 500

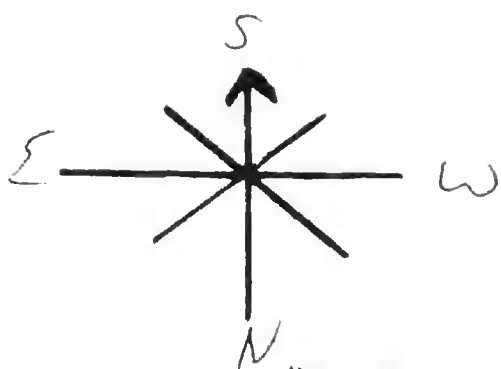
12
1





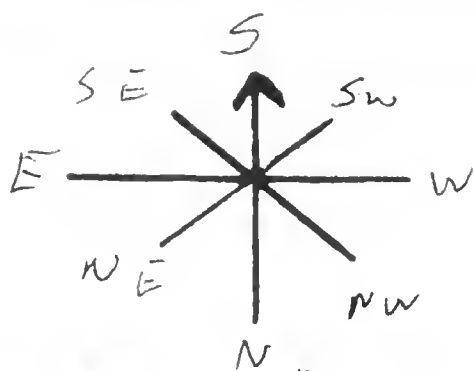
DATE 14 July 64
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0548	begin observations					
0555	Sooty Tern	2	E			
	Wedgetail	1	E		light	
	Newell's S.	1				
0605	Wedgetail	3	S			
0620	Sooty Tern	1	S			
0635	Bulwer's P.	1	N			
0640	Newell's S	1	E			
0650	Bulwer's P.	1	S			
0654	Bulwer's P	1	S			
0700	Wedgetail	1	S		light	
0703	Bulwer's P	1	W			
0704	Sooty Tern	4	NW			
0706	Wedgetail	1	NE		light	
0715	Tropicbird sp	1				
0717	Sooty Tern	3	S			
0718	Bulwer's P.	1	SW			
0719	Wedgetail	1	S		light	
0730	Frigate	2	N			
0736	Dark-rumped P	1				
	Bonin Is P	1	SW			
0750	Sooty Tern	8				
	Dark-rumped P	2			feeding flock	
	Wedgetail	1				
	Bonin Is P	1				
	Frigate	1				
0801	Bulwer's P	1	SE			
0815	Wedgetail	1	SE		dark.	
0817	Wedgetail	1	S		light	
0819	Wedgetail	1	SW		light	
0837	Wedgetail	1	SW		light	
0851	Bulwer's P.	1	SW			
0939	Wedgetails.	1	N		light	
0954	Sooty Tern	1	N			
1030	Dark-rumped P	1	N			
	Bonin Is P	1	N			



DATE 14 July 64
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1038	Dark-rumped P	1	W			
	Bulwers P	1	W			
1050	Bonin Is. P.	1	W		new plumage	
1115	Dark-rumped P	1	SE			
1215	Wedgetail	30±5	⊙		28 dark light, 2 dark } Feeding flock	
	Bonin Is. P.	50±6	⊙			
	Dark-rumped P	2				
	Fairy Tern	2				
	Sooty Tern	50±5				
1239	Bonin Is. P.	1	W			
1240	Wedgetail	1				
1256	Bulwers' P.	1	N			
1300	Dark-rumped P.	1	W		seen by watch	
1305	Sooty Tern	6			travelling	
1306	Dark-rumped P	1	SW			
	Wedgetail	1	W			
1309	Dark-rumped	1	SW		light new plumage - light grey	
	Wedgetail	1				
1315	Dark-rumped	1	SE		new plumage - light grey	
1314	Wedgetail	1	S			
1320	Wedgetail	1	S			
	shear/petrel	1	S			
1328	Dark-rumped	2			light sitting on water	
	Wedgetail	1				
1345	Sooty Tern	2				
1350	Dark-rumped	1			seen by watch	
	Wedgetail	1				
1406	Bulwers P	1	S			
1414	Bonin Is P	1	W			
1426	Wedgetail	1	W		Light	
1440	shear Petrel	1	S			
	Wedgetail	2	S		Light	
	Dark-rumped P	1	S		light grey	
1445	Dark-rumped P	1	SE		light grey	
1450	Wedgetail	1	W		light	

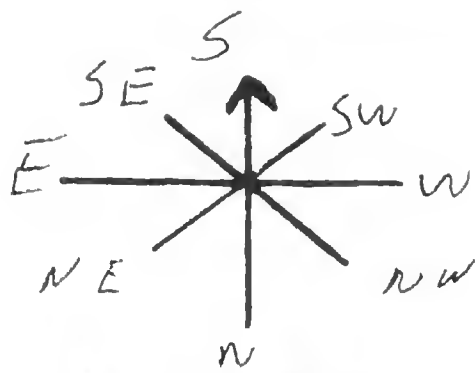


DATE 14 July, 1964
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
1455	Sooty Tern	6	W		Traveling	
1459	Wedgetail	1	W		Light	
1536	Bonin Is P	1	SE		new plumage	
1540	Dark Rumped P	1	S			
1546	Sooty Tern	2	NW			
1554	Wedgetail	1	N		Light	
1558	Shear/petrel	1	W		seen by watch	
1720	Bonin Is P	1	W			
1739	Bonin Is P.	1	S			
1755	Dark-rumped P	1	SE			
	Bulwers P.	1	SE			
1920	End observations					

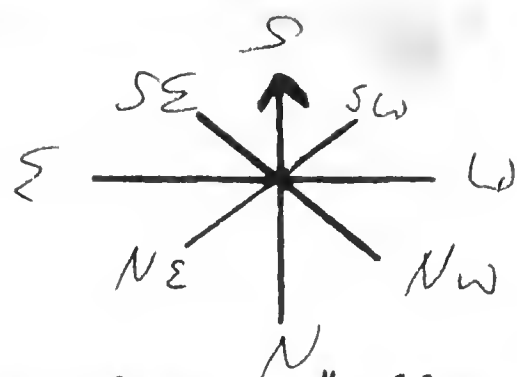
11
56
1.4
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196



DATE 15 July 64
Pg. # 1

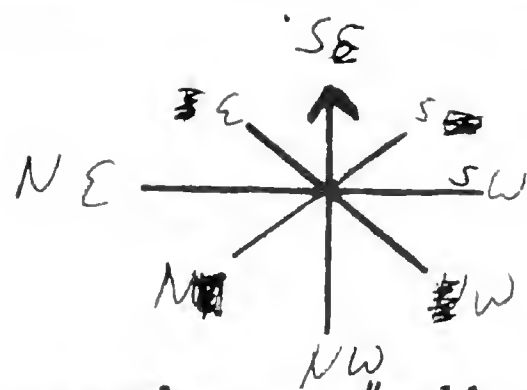
	time	species	#	dir.	hgt.	remarks	loc.
	0550	Begin observations					
T-PR	0630	Dark R. P.	2	W			
	0710	Sooty Terns	12	W			
		Wedgetails	6±2			Bright black light grey on back } Feeding DRA or Bonin Is P.	
		Dark R. P.	5				
		Shear petrel sp	10±				
	0725	Bonin Is P.	1	SW			
	0730	Dark rumped P.	1	SW		Darker grey on back.	
	0755	Petrel sp	3+	SW		at considerable distance	
2	0815	Petrel sp	10±3	SE		scattered flock	
	0825	Bonin Is P.	1	S			
P-PR	0831	White-necked P.	1	NW			
3	0837	Sooty Tern Shearwater Petrel sp	25+ 60+	SE		feeding flock almost all petrels	
	0855	Dark-rumped P.	1				
		Petrel sp	2				
	0856	Dark-rumped P.	1	SE			
	0915	Shear/petrel	3	NE		molting	
	0925	Bonin Is P.	1	SE			
	0926	Petrel sp	1	N			
	0931	Petrel sp	1	SE			
T-PR	0933	Dark rumped P.	1	SW		Dark grey on back	
	0940	Shear-Petrel	1	SE			
	0946	Dark rumped P.	1	SW			
	0950	Dark rumped P.	1	SE			
	1024	Bonin Is P.	1	W			
	1045	Dark rumped P.	1	SE		Sitting on water - very dark on top	
	1052	White-necked Petrel	1	SE		Sitting on water	
	1104	Petrel sp	1	SW			
	1108	shear/petrel	1			seen by capt.	
	1226	Dark R. P.	1	NW		dark on back.	
	1305	Dark R. P.	1	NW		" " "	
	1311	Dark R. P.	1	SE		" " "	
	1317	Dark R. P.	1	SW		Brownish on back.	
	1325	Dark R. P.	1	NW			
	1404	White-necked P.	2	E			
	1415	shear/petrel	1	SE		molting, 1 sitting on water	



DATE 15 July 64
Pg. # 2

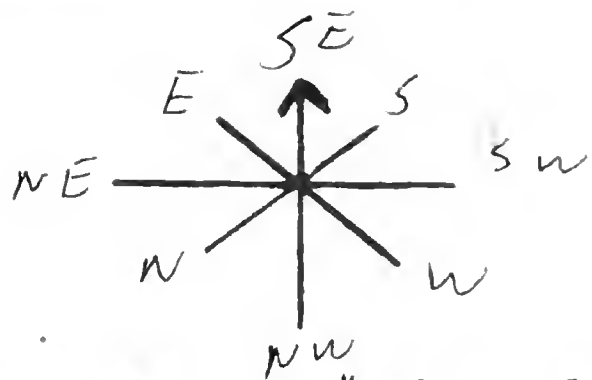
	time	species	#	dir.	hgt.	remarks	loc.
JFP	1426	Dark-rumped P.	1	⊙		molting	
P. 41	1432	White-necked P.	1			sitting in water, molting	
JFP	1437	Dark-rumped P.	1			molting	
		Wedgetail	1			dark, molting, sitting on water	
JFP	1440	Dark-rumped P.	2			molting	
	1442	Wedgetail	1			dark	
	1504	Wedgetail	2			dark, molting	
JFP	1516	Dark-rumped P.	1	NW		molting	
	1518	Wedgetail	2			sitting on water, dark, molting	
	1528	Wedgetails	4	S			
41	1538	Wedgetail	5			sitting in water, molting	
JFP	1626	Dark-rumped P.	1	S			
BWP	1710	Bonin's P.	1	NW			
	1730	Wedgetail	3	↖		dark	
	1731	Fairy Tern	1	E			
	1910	end observations					

$$\begin{array}{r} 9 \\ 23 \\ 37 \\ 25 \\ 28 \\ 66 \\ \hline 188 \end{array}$$



DATE 16 July 64
Pg. # 1

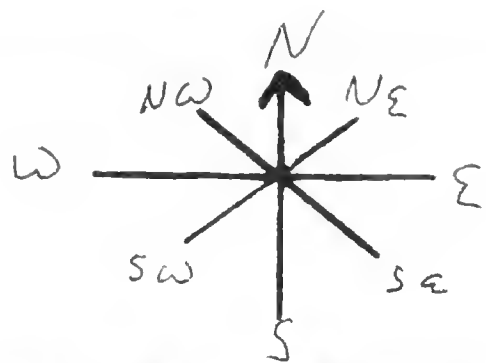
time	species	#	dir.	hgt.	remarks	loc.
0610	begin observations					
0650	Bonin Is P	1	NE		finished molting - very thin dark borders around underwing, no hash mark	
0722	Bonin Is P	1	E			
0735	petrel sp.	1	S		sitting on water - hash mark + borders Pan molting	
0745	Dark-rumped P	1			seen by watch	
0755	Bonin Is P	1	W			
0821	Shear-Petrel	1	SW		seen by capt.	
0831	White-necked P	1	W			
0906	Petrel sp	1	SW			
0924	Dark-rumped P	1	SW			
1010	Dark-rumped P	1	NW			
1053	Newell's S.	1	NE			
1130	Sooty Tern	2	NE			
1132	Dark-rumped P	1	NE			
1135	Petrel sp X	1	SW		Underwings entirely dark - size of DRP - Flew like DRP.	
1146	Bonin Is P	1	SW			
	Dark-rumped P	1	SW			
1147	Dark-rumped P	1	E			
1153	Dark-rumped P	1	E			
1230	Bonin Is P.	1				
	White-necked P.	1	N		molting	
1229	Fairy Tern	1	⊙			
1240	Wedgetail	1	S		dark	
1310	Shear/petrel	1			seen by watch	
1312	Bonin Is P.	1	NE			
1326	Wedgetail	1	SW		dark	
1339	Bonin Is P	1	SW			
1342	Wedgetail	3	SE		dark	
	Bonin Is P	1				
1346	Sooty Tern	1	SE			
1358	Wedgetail	2	E		dark	
1415	Wedgetail	1	SE		dark	
1430	Dark-rumped P	1	NE			



DATE 16 July 64
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1447	Wedgetail	1	SE		dark.	
1505	Dark-rumped P.	1	SW			
1533	Wedgetail	1	NW		dark	
1542	Bonin Is P	1	SE			
1603	Wedge tail	1			dark.	
	Dark-rumped P	1			seen by watch	
1610	Wedgetail	2			seen by watch	
1625	squid 3" long jumped clear of water by bow of ship					
1637	Newell's S.	2	E			
1645	Sooty Tern	50 ± 10				
	Wedge tail	50 ± 10			dark	
	Dark-rumped P	10 ± 2			shot / dark-rumped but due to misunderstanding	
	White-necked P.	5			ship didn't stop to pick it up.	
	Petrel/shear X	1			Brown above, white underparts, brown underwing	
					size of Dark-rumped, white headed look	
1712	Newell's S.	1			shot and downed but revived & flew away attacking	
1731	Newell's S.	1	NE		reviving	
1733	Bonin Is P	1				
1840	Bonin Is	3				
1845	Dark RP	1				
1850	Dark AP	1				
1811	Wedgetail	1	SW		Dark.	
1900	E not observations					

19
64
11
53
22
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66



DATE 17 July 64
Pg. # 1

time species # dir. hgt. remarks loc.

0550 begin observations

0630 Wedgetail 1 NE

Dark.

0700 Shear/Petrel 3

seen by watch

0837 White-necked P 1 S

0838 Dark-rumped P 1 S

0907 Bonin Is P. 1 W

1013 Wedgetail 1 N

Dark.

0915 Dark-rumped P 1

seen by watch

1230 Shear-Petrel 1 NW

seen by watch

1230 ~~Shear-Petrel~~
Dark Wedgetail 1 N

Dark

1315 Wedgetail 1 W

Light

1439 Wedgetail 1 E

dark

1450 Bonin Is P. 1 N

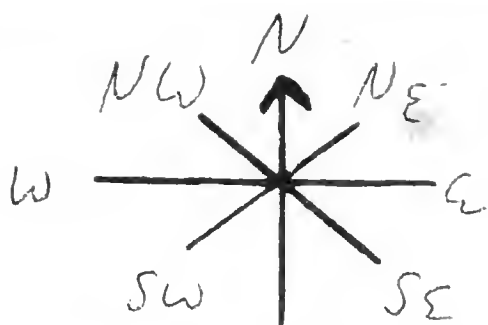
1456 Red-tailed TB. 1 (C)

very immature - no tail at all - much vermiculation
on back, bill yellowish black

1713 Dark-rumped P 1 NW

1840 Petrel/Shear 1 S

1900 end observations

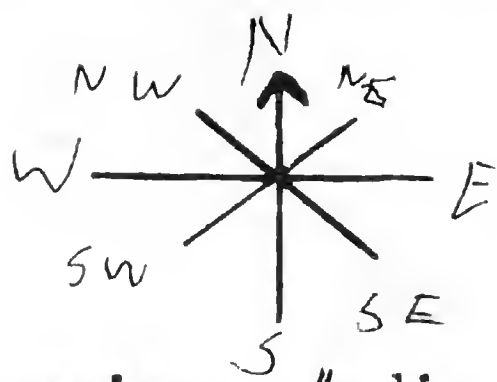


DATE 18 July 64
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0610	begin observations					
JFP	0735	Dark-rumped P	1	N			
TEP	0746	Dark-rumped P	1	NE		seen by watch	
JFP	0908	Dark-rumped P	1	SE			
	0930	Red T. Tropicbird	1	E		Tail missing	
	0945	Sooty Terns	100±10	70			
		Wedgetails	40±20			25 or 30 dark	
JFP		Dark R. Petrel	20±5				
BWP		Bonin Is P	50±				
	1030	Bonin Is P.	1	L			
	1046	Wedgetail	2			dark	
JFP		Dark-rumped P	1	NW		heavily molting	
	1050	Red-tailed Tropicb.	1	⊙			
JFP	1055	Bonin Is P.	1	NW			
FWP	1114	Bonin Is P	1			sitting in water	
JFP	1136	Dark-rump	1			sitting on water	
JFP	1137	Dark-rump	1			sitting on water	
JFP	1235	Bonin Is P	1	E			
JFP	1237	Dark-rump	2			sitting on water	
	1256	Petrel sp.	1	NE			
JFP	1255	Dark R. Petrel	1	NW			
	1420	Petrel/Shear	3+			circling + high arcing	
JFP	1454	Dark-rump	1	NW			
JFP	1456	Dark-rump	1	N			
JFP	1503	Dark-rump	3	E			
JFP		Bonin Is P	1	NE			
JFP	1511	Dark-rump	2	E			
JFP	1520	Dark-rump	1	NW			
JFP	1535	Sooty Terns	10±5	NW			
		Dark R.P.	30±5				
		Wedgetails	15±5			feeding	
JFP	1540	Dark R.P.	2	NE			
	1544	R.T. Tropicbird	1	SE			
JFP	1548	Dark R.P.	2	E			
JFP	1552	Bonin Is P	2	NE			

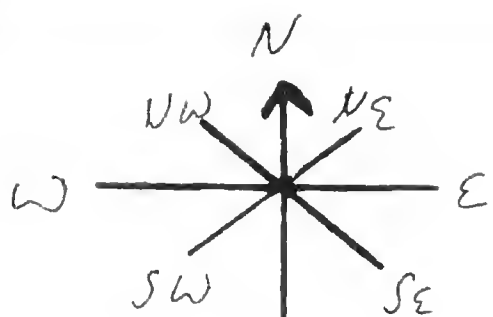
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81.
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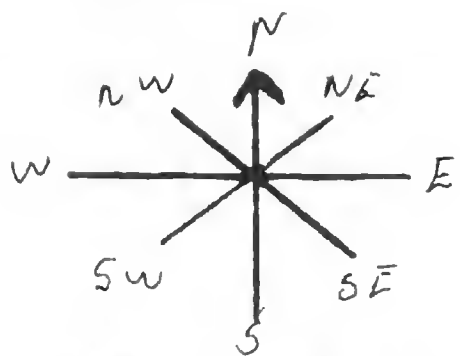
DATE 18 July 64
Pg. # 28

	time	species	#	dir.	hgt.	remarks	loc.
JFP	1650	Dark-rumped P	1	SW			
JFP	1653	Dark-rumped P	2	NE			
JFP	1655	Bonin P	1	NW			
JFP	1658	Dark-rumped P	1	NW			
JFP	1701	Dark-rumped P	1	NE		slightly lighter on back.	
JFP	1708	Dark-rumped P	1	NE			
JFP	1712	Dark R P	10				
BWP		Bonin P	1				
		Wedgetail	4	N		light sitting	
JFP	1716	Dark R P	3	NW			
JFP	1725	Dark-rumped	1	N			
	1750						
JFP	1745	Dark-rumped	20			flour feeding. feed 8 times or 10 at 50 ft	
JFP	1750	Dark-rumped	3	N		to 40 yds, saw feathers fly or 3 birds, twice more	
	1751	Wedgetail	1	N		but none dropped immediately, so we didn't slow	
	1800	Wedgetail	2	N		light	
	1810	Sooty Tern	1	E		at least 2 killed, may be	
	1825	Shear-Petrel	1	E		up to 5 - with automatic	
JFP	1826	Dark-rumped	1	N		several could have been dropped	
JFP	1827	Dark-rumped	1			sitting	
	1900	end observations					



DATE 19 July 64
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0533	begin observations					
	0621	Wedgetail	1	NW		Dark.	
		whitemech P	1	NW			
	0625	Petrel sp	2	SE			
JFP	0629	Dark rumped P	2	W			
	0630	Wedgetail	1	W		Light	
	0728	Shear-Petrel	1	SE			
	0821	Wedge tail	1	SE		light	
JFP	0855	Dark rumped	2	N			
		Wedge tail	2	N		1 light, 1 dark	
	0856	Tropicbird sp	1	⊙			
JFP	0913	Dark rumped P	1	S		not tiny	
	0915	Shear/Petrel	2	W			
	0916	Shorebird	1	⊙		all brown, lighter below, with fairly long, straight bill. No white on tail, no barring - size of Golden Plover. Fined 5 times, hit at least once	
JFP	0917	Dark rumped P	1	S			
	0915	R.T. Tropicbird	1				
JFP	0930	D.R. Petrel	1	NW			
JFP	0933	PR Petrel	1	NE			
BWP	0935	Bonin's P	1	W			
BWP	0944	Bonin's P	1	NW			
BWP	0945	Bonin's P	1	NW			
BWP	0955	Bonin's P	1	NW			
	1005	Sooty Tern	25±	10			
		Dark R. Petrels	25±	10		20 dark feeding	
		Wedgetail	40±	10			
		Bonin's P	10±	5			
		Fairy Tern	2				
		Frigate	1				
	1056	Sooty Tern	1	SW			
-FP	1044	Dark R. Petrel	1	NW			
	1045	Shear-Petrel	2	S			

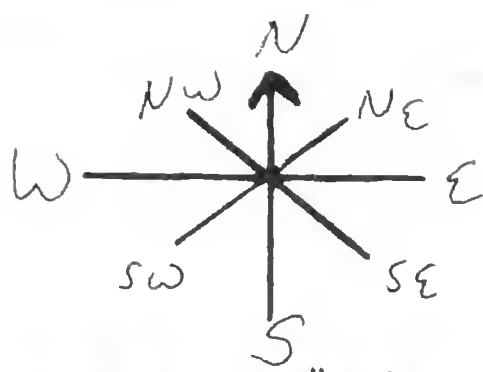


DATE 19 July 64
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
	1055	Sooty Terns	60 ± 20	NW		Feeding	
		Shear-Petrel	40 ± 10				
	1102	Petrel sp	1	NW		seen by watch & capt.	
	1104	Wedgetail S	3	NE		Light	
BWP	1132	Bonin Is. P.	3			sitting on water	
STP	1133	Dark Rump P.	1	N		Molting	
	1136	Sooty Tern	1	S	75 ft		
BWP	1135	Bonin Is. P.	1	E			
BWP	1147	Bonin Is. P.	1			sitting on water	
BWP	1158	Bonin Is. P.	2			seen by watch	
BWP	1202	Bonin Is. P.	1			sitting on water	
	1215	Sooty Tern	25 ± 2				
		Wedge tail	5 ± 2			2 dark - 3 light feeding	
BWP	1239	Bonin Is. P.	1	NW		sitting on water	
STP	1251	Dark R. Petrel	1	W			
STP	1259	Dark R. Petrel	1	NW			
	1439	White Tailed Tropicbird	1	⊙			
	1450	Wedgetail S	1	⊙		Light	
	1505	Sooty Tern	25 ± 2				
		Wedgetail	14 ± 2			2 dark feeding flock	most shears, sitting
		Newell's S.	1			in water	
	1528	Newell's S	2	NW			
	1530	Shear/petrel	1	NW			
	1531	White-tailed Tropicbird	1	N			
	1650	Wedgetail	1	S		Dark	
	1712	Wedgetail	1	W		Light	
BWP	1814	Bonin Is. P.	1	W			
	1820	Wedgetail S.	1	E		dark	
	1847	Sooty Tern	2	E		1 immature	
	1908	end observation					

15
 71
 24
 189
 37
 2 46
 382

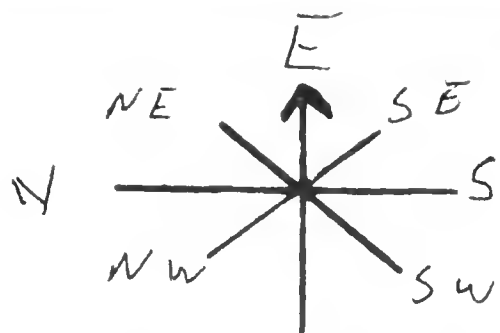
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85



DATE 20 July 64
Pg. # 1

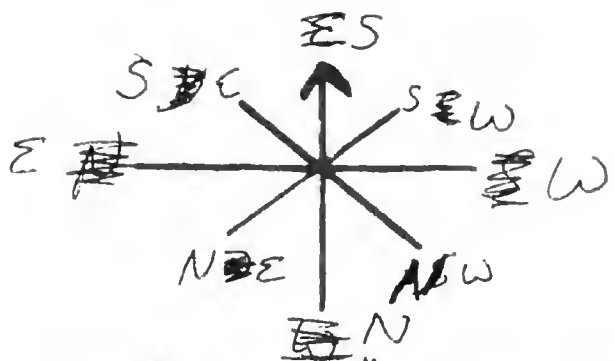
time	species	#	dir.	hgt.	remarks	loc.
0545	begin observations					
0550	Red-tailed Tropicbird	1	⊙			
0605	Wedgetail	1			light - seen by watch	
0615	Wedgetail	2				
0616	Petrel sp	1	S			
0620	Petrel sp	1	S			
0645	Wedgetail	1	SW		light	
0656	Sooty Tern	1	SW			
0701	Sooty Tern	1	SW			
0705	Sooty Tern	1	SW			
0732	Sooty Tern	125 ± 25			feeding flock, 1 dark	
	Wedgetail	45 ± 10				
	Frigate	2				
0743	Shear/petrel?	1			brown, 2 light patches under wings, rest of body brown but not too dark - not wedgetail - seen by watch	
	Sooty Tern	2				
0824	W.T. Tropicbird	1	SE			
0835	Bulwer's P	1	SE			
0902	Bonin's P	1	NW			
0916	Petrel sp	1	W			
0920	Wedgetail	1	NW		Dark	
0932	Sooty Tern	75 ± 10			feeding molting	
	Wedgetail	40 ± 10				
	Dark rumped sp	1+				
0938	Bonin Is P.	1	NW			
0950	Shear-petrel	1	S		seen by watch	
0955	shear-petrel	1			seen by watch	
1010	sooty Tern	85 ± 5		150 ft	feeding	
	Wedgetail	25 ± 10				
1049	Fairy Tern	1	NE			
1142	Sooty Terns	8	NE		Feeding, light Wedgetails	
	Wedgetail S	5				
1151	Sooty Terns	25 ± 5	S		- 2 or 3 dark feeding. Dark rumped or Bonin's Is Petrels	
	Wedgetails	10				
	Petrel sp	8				

$$\begin{array}{r} 15 \\ 145 \\ 658 \\ 16 \\ \hline 281 \\ 210 \end{array}$$



DATE 20 July 64
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1202	Wedgetail	1	E		Light	
1400	Sooty Tern	250 ± 50				
	Shear/petrel	75 ± 25			feeding flock	
	Frigate	1				
1445	Shear-Petrel	1	S			
1515	Shear-Petrel	1	N			
1535	Wedgetail	1	SE		light	
1548	Shear/petrel	1	S			
1550	Sooty Tern	85 ± 5				
	Fairy Tern	4			feeding	
	Wedgetail	10 ± 5				
1635	Bonin I.S.P.	1	S			
1710	Wedgetail	3	NW		2 light 1 Dark	
1910	End Observations					

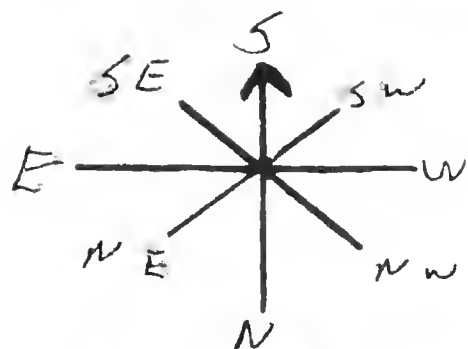


DATE 21 July 64
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0538	begin observations					
0545	Petrel-Shear	1	SE			
0617	Dark-rumped P	1	SW			
0621	Great Frigate	1	NW			
0714	Shear-Petrel	1	NW			
0757	Sooty Tern	1	N		immature - changing	
0813	Petrel sp	1	N			
0842	Dark-rumped P	1	SE		molting	
0910	Sooty Tern	2				
	Wedgetail	4				
	Dark-rumped	3			travelling	
	Brown I-s P.	2				
	Bulwers P	1				
0920	Sooty Tern	25	± 2			
	Shear/petrel	5	± 2		dispersing	
0925	Dark-rump P	1	E			
	Brown I-s P	1				
0930	Sooty Tern	25	± 5			
	Shear/petrel	5	± 2		travelling	
0940	Wedgetail	1	SW		Light	
1001	White-rumped P	2	SW			
	Wedgetail	1	SW			
1009	Shear-Petrel	1	W			
1025	Bulwers P	1	SW			
1035	Dark-rumped P	1	SE			
1113	Christmas Is S.?	1	E		sitting on water - slightly smaller than Wedgetail, all dark	
1203	Sooty Tern	2	NW		1 immature	
1229	Bulwers P.	1	N			
1239	Petrel sp.	1	SW			

20
16
135
15
20

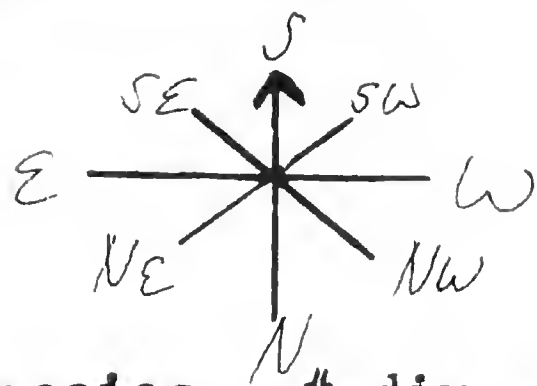
206



DATE 21 July 64
Pg. # 2

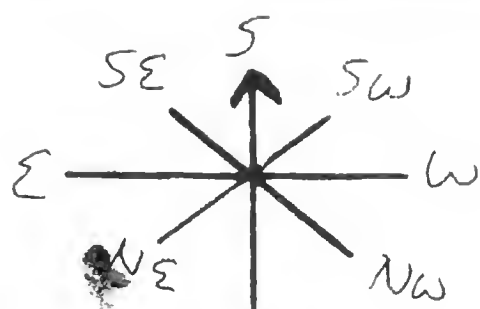
time species # dir. hgt. remarks loc.

1310	Petrel sp? Shear/petrel X	1	SW		All dark under wings except for narrow (very narrow) white strip in middle of wing. No dark breast band, no black on head or back that could be seen. Flw like a cross between Bonin & Panda D. R. Petrel. About the size of a D. R. Petrel a little smaller. Body was white.	
1330	Wedgetail	2	SW			
1335	Dark R. P. Wedgetail	2 1	SE		1 collected by Husted # 0509 1.05 lbs. Dark.	
1342	Sooty Terns	2	S			
1410	D. R. Petrel	1	SE			
1450	Sooty Tern Wedgetail Shear/petrel Dark-rumped	75 ± 10 3 5+ 3+ 5+	SE E		feeding flock - rising - formed & dissolved several times during hydro station	
1451	Dark-rumped	1	E		headed toward flock &	
	Frigate bird	1			with feeding flock	
1630	Petrel sp? Bonin Is P.	1	S		Very small, white underneath, flew like Bonin Is., may have been a small Bonin Is.	
1635	Wedgetail D. R. Petrel Sooty Terns	3 2 3	SW		Dark #1, light 2 travelling	
1640	Bonin Is P	1	SE		Sitting on water	
1644	B. T. Tropicbird	1	SE			
1735	Red-tailed Tropic	1			sitting on water	
1841	Dark-rumped P	2	NW			
1844	Bonin Is P	1	W			
1850	Shear/petrel	1	W		seen by watch	
1900	Shear/petrel	1	S			
1910	end observations					



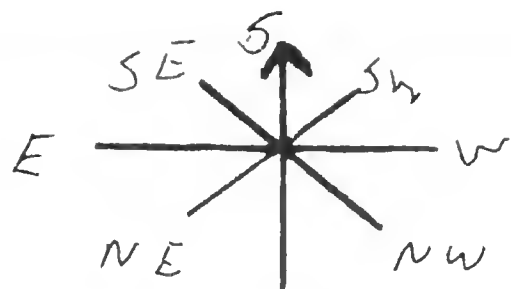
DATE 22 July 64
Pg. # 1

	time	species	#	dir.	hgt.	remarks	loc.
	0545	begin observations					
JFP	0610	Dark-rumped P.	1	SE			
JFP	0614	White-necked	2	E			
	0625	Petrel sp.	1			sitting on water	
	0640	Booby sp	1	N	75ft	seen in distance - described by engineers as big white bird with long neck	
JFP	0715	Dark-rumped P.	2	E			
JFP	0720	Dark-rumped P.	2	S		1 molting slightly, 1 pretty dark	
JFP	0730	Dark-rumped	2	E			
		Newell's S.	1				
	0736	Red-tailed Tropicb.	1	(C)			
JFP	0758	Dark-rumped P.	1	E		molting	
JFP	0810	Dark-rumped P.	1	E			
JFP		Bonin Is P.	1	S			
	0815	Wedgetail	2	E			
JFP		Dark-rumped P.	1			Feeding	
JFP		Bonin Is P.	1				
	0820	Newell's S	1	E		Seen by capt, right in sun	
JFP	0824	Dark R.P.	3	W			
		Petrel sp	2			Feeding	
JFP	0830	Dark-rumped P.	1	E		Light back.	
JFP	0841						
JFP	0840	Dark-rumped P.	1	SE			
JFP	0935	Dark-rumped P.	2	E			
JFP	1000	Dark-rumped P.	1	SW			
JFP	1020	Dark-rumped P.	1			sat in water	
JFP	1040	Sooty Tern	25	±3			
		Dark-rumped P.	6			Feeding	
		Wedgetail	6			1 collected by King #0510	
		JFP				light	
	1045	White-necked P.	2				
		JFP					
		Dark-rumped P.	1			1 collected by King #0511	



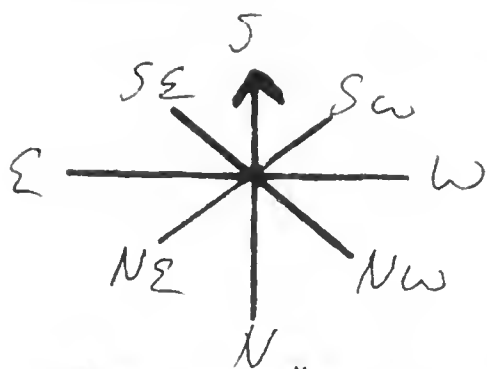
DATE 22 July 64
Pg. # 2

time	species	N ^o	dir.	hgt.	remarks	loc.
1105	Petrel sp	3			seen by watch	
1110	Sooty Tern	90 ±10			eight 3 separate groups joined up, each with about 30 sooty Terns - feeding	
	Wedgetail	2				
	Dark-rumped P	6				
	White-necked P	2				
	Fairy Tern	1				
1120	Sooty Tern	25			feeding flocks close together, very close to ship, following Sooty Terns immature changing to adult molting adult	
	Dark-rumped	5				
	White-necked	1				
1130	Sooty Tern	20				
	Dark-rumped	6				
	White-necked	2			feeding 2 dark rumps chasing flying fish, flying same direction, South dark almost 1 long flock - Adm present	
	Wedgetail	1				
	Fairy Tern	1				
1135	Dark-rumped	6			most sitting in water - not feeding	
	White-necked	1				
	Wedgetail	1				
1145	Dark R P	1			collected by Husted # 0512	
1148	DR Petrel	1	SE			
1149	W.T. Tropicbirds	2	E			
1250	DR Petrel	1	W			
1225	Dark-rumped P	1	S			
1227	Wedgetail	1			following ship, light	
1229	Dark-rumped P	1	NE			
1235	Sooty Tern	20 ±10			feeding flock - wing off	
1238	Dark-rumped P	1	W			
1246	Sooty Tern	7	G		travelling	
1250	Dark-rumped P	1	SW			
1255	Dark-rumped P	2			sitting	
1300	Dark-rumped P	1				
1301	Dark-rumped P	3			"	
1302	Sooty Tern	55 ±2				
	Dark-rumped P	5			feeding sitting on water	
1330	Dark R P	2	S			



DATE 22 July 64
Pg. # 3

	time	species	#	dir.	hgt.	remarks	loc.
JEP	1344	Dark-rumped P.	1	SE			
	1348	Petrel sp.	1	SE		seen by watch	
JEP	1356	Dark-rumped P.	1	SE			
JEP	1400	Dark-rumped P.	5	SE			
P.P.		White-necked P.	2	S		travelling	
JEP	1441	Dark-rumped P.	1	SE			
	1450	Sooty Tern	20 ± 2				
		Dark-rumped P.	4			feeding	
JEP	1500	Dark-rumped	7				
		White-necked P.	2			↑ 1 collected by King #0513 same as above flock	
	1502	Dark-rumped	3			sitting on water	
JEP	1506	Dark-rumped	1	S			
JEP	1509	Dark-rumped P.	1				
		Wedgetail	1	N		light	
JEP	1534	DRP	1	W			
JEP	1535	DRP	1	S			
		Wedgetail	1			Dark	
JEP	1538	DRP	2	SE			
JEP	1539	Bonin's P.	1	NE			
JEP	1555	DRP	1	S		collected by Husted #0514	
JEP	1602	Dark-rumped P.	1	S			
	1610	Fairy Tern	1	SE			
	1614	Petrel sp.	4	SW		seen by watch	
	1628	Sooty Terns	6	SE		Feeding	
JEP		DRP	4				
		Wedgetails	2				
JEP	1650	Dark-rumped P.	2			1 shot by Husted but, although pointed out by watch, first mate he made 1/4 turn, said he couldn't see bird and resumed course. Gave no cogent reason for not picking up bird.	



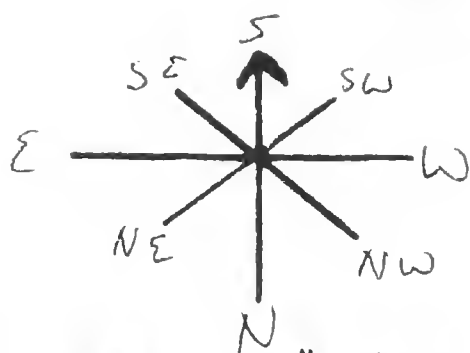
DATE 22 July 64
Pg. # 4

time	species	#	dir.	hgt.	remarks	loc.
JFP 1754	Dark-rumped P.	1	SE			
1836	Tropicbird Fairy Tern	2	NW			
1900	end observations					

$$\begin{array}{r}
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 268 \\
 103 \\
 114 \\
 \hline
 427
 \end{array}$$

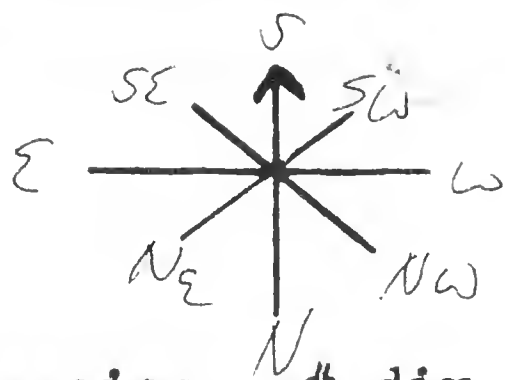
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 110000
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$$\begin{array}{r}
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 \hline
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DATE 23 July 64
Pg. # 1

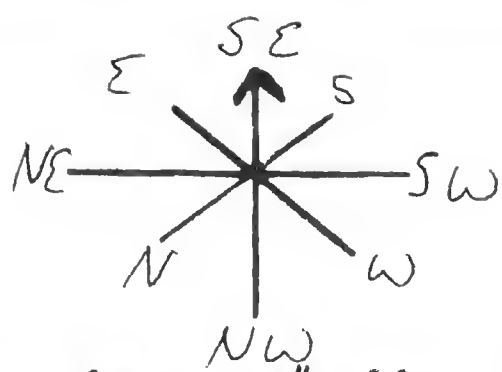
time	species	#	dir.	hgt.	remarks	loc.
0538	begins observations					
0625	Bonin Is P	1	SE			
0638	Sooty Tern	1	E			
0652	Petrel sp	3	SW			
0701	Wedgetail	1	SW		Light Dark	
0708	Sooty Tern	2	SW			
0717	Dark-rumped P	1	SW			
0725	Dark-rumped P	1	S			
0731	Petrel sp	1	SW			
0815	Dark-rumped P	1	N			
0820	Dark-rumped P	3			sitting on water	
0823	Dark-rumped P	3	S			
0827	Dark-rumped P	2	S			
0834	Dark-rumped P	1	S		sitting	
0837	Dark-rumped P	2	SW			
0842	Dark-rumped P	5			sitting	
0855	Dark-rumped P	1			sitting	
0858	Dark-rumped P White-rumped P	1	SE			
0916	Dark-rumped P	1	E		molting	
	Bonin Is P	1	W			
0925	Dark-rumped P	3			sitting in proximity to large log, Mahimahi under log	
0948	Dark R P	1	SW		sitting on water	
1020	Dark-rumped P	1	W			
1115	Bonin Is P	1	N			
1130	Sooty Tern	30 ± 1				
	Dark-rumped P	3+			feeding	
	Wedgetail	1+			dark	
1131	Sooty Tern	50 ± 25			wing out - feeding - probably shear/petrel too but too far	
1325	Bonin Is. P	1	SE			
1420	Thomson's Storm Petrel	1	NW		very erratic flight, fairly stiff wings, covered wide	
1445	Dark-rumped?	1	NW		are on flap	
1506	Dark-rumped P	1	SE		very dark back	



DATE 23 July 64
Pg. # 2

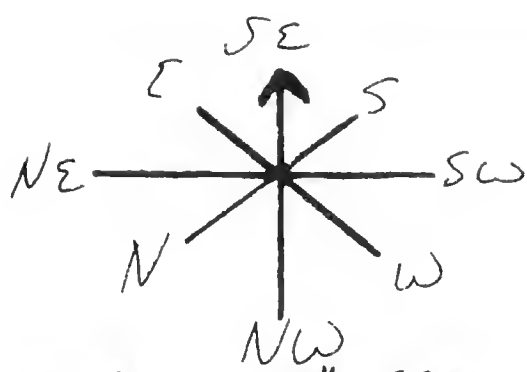
time	species	#	dir.	hgt.	remarks	loc.
1715	Petrel sp	1	SW			
1728	Dark Rumped P	1	S			
1734	Wedgetail	1	SE		Dark.	
1750	Petrel sp	1	SW			
1800	Petrel sp	1	SW			
1802	Dark rumped P	1	NE			
1820	Dark rumped	1	NE			
1840	Dark rumped P	1	SE			
1842	Wedgetail	4	NE		dark	
1850	and observations					

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83
35
138



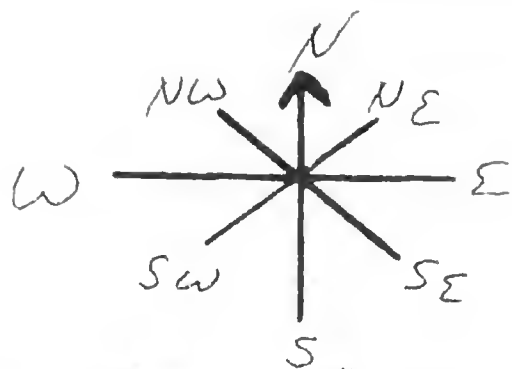
DATE 24 July 64
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0400	feeding flock	30			species undetermined, seen by 2nd mate in the light of full moon, working	
0610	begin observations					
0616	Bonin Is P	1	E			
0640	Wedgetail	1	SW		dark	
0648	Sooty Tern	3			feeding	
	Dark-rumped P	7			dark	
	Wedgetail	3				
0654	Dark-rumped P	1	SE			
0714	Wedgetail	1			dark, seen by watch	
0728	shear/petrel	3				
0752	Dark-rumped P	1	W		seen by watch	
0811	Shear-Petrel	1	NE		Seen by watch	
0845	DR Petrel	1	S			
0854	Bonin Is P	1	SE			
0913	Dark-rumped P	1	S			
0926	Wedgetail	1	W		Dark.	
1005	Bonin Is P	1	NW			
1147	Wedgetail	1	E		Dark.	
1201	Sooty Tern	1	NE			
1209	Dark-rumped P	1	SW			
1318	Wedgetail	1	SW		dark	
1321	Wedgetail	1	NW		dark	
1332	Wedgetail	1	NW		dark	
1350	Wedgetail	1	NW		dark	
1415	Petrel sp	1	NW			
1418	Wedgetail	1	NE		Dark	
1425	Dark-rumped P	1	SE			
1441	Wedgetail	1	E		Dark.	
1444	Bonin Is P	1	NE			
1513	Dark-rumped P	1	NE			
1607	Wedgetail	1	NW		dark	
1610	Wedgetail	1	W.		dark	



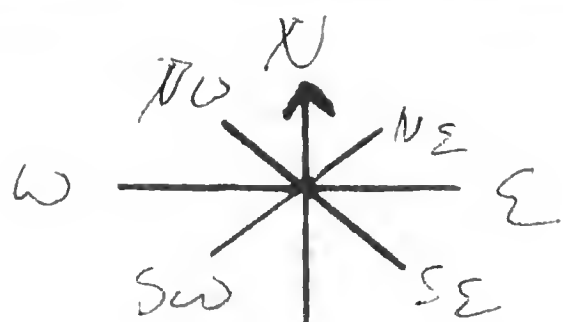
DATE 24 July 64
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1610	Sooty Tern	1	NW			
1630	Bonin Isp	1			seen by watch	
1655	Bonin Isp	1	E		in heavy rain squall	
1712	Bonin Isp	1	S		new plumage	
1715	Wedgetail	1	E		Dark.	
1725	W.N. Petrel	1	SE			
1806	Bonin Isp	2	E			
	Harcourt's Storm P	1	N		stiff winged	
1808	Bonin Isp	1	SW			
1811	Sooty Tern	3				
	Wedgetail	1			dark	
	Dark-winged P	1			dispersing flock	
1844	End observations					



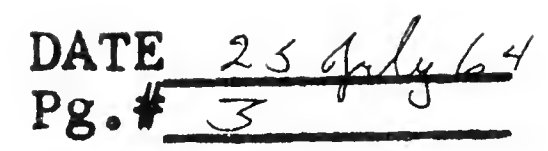
DATE 25 July 64
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0540	begin observations					
0625	Dark-rumped P	1	NE			
0636	Wedgetail	1	SE		Dark.	
0656	Bonin Is P	1	E			
0658	Shear-Petrel	1	NE			
0701	Wedgetail	1	N		Dark.	
0800	Shear/Petrel	1	S			
0801	Dark-rumped P	1	SE		dark	
	Wedgetail	1	SE			
0823	White-necked	1	SE			
	Dark-rumped	1	SE			
0845	Wedgetail	2			dark	
	White-necked P	1			seen by watch	
	Shear-petrel	1			Newell's or Bonin's	
0858	Dark-rumped P	1	E			
0902	Dark-rumped P	1	SE			
0904	Wedgetail	3	NE		dark	
0907	Bonin Is P	1	NW			
0910	Dark-rumped P	1	S			
0912	Dark-rumped P	2	N			
1100	Dark-rumped P	1	W			
1102	Dark-rumped P	1	NE			
1108	Dark-rumped P	1	NE			
1115	Wedgetail	1	SW			
1117	Dark-rumped P	1	S			
1126	Shear/petrel	1			seen by watch	
1143	Dark-rumped P	1	NE			
1147	Dark-rumped P	1			seen by watch	
1154	Dark-rumped P	1	E			
1155	Shear/petrel	1			seen by watch	
1205	Shear/petrel	1	N			
1206	Bulwer's P.	1	N			
1211	Bonin Is P	1	N			
1216	Sooty Tern	2				
	Shear/petrel	1				



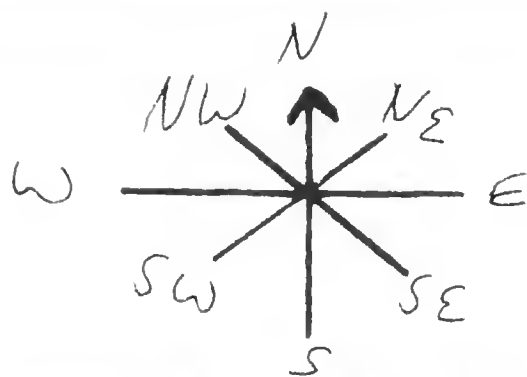
DATE 25 July 64
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1219	Dark-rumped	1	S			
1232	Dark-rumped P	1	NE			
1237	Dark-rumped P	3	SW			
1253	Dark-rumped P	2	NW			
	shear-Petrel	1				
1304	Dark-rumped P	1	NW			
1311	shear-Petrel	1	NE			
1314	Wedgetail	1	NW		Dark.	
1315	Dark-rumped P	1	W			
1406	White-headed	1	W			
1410	Bonin Is P	1				
1345	Wedgetail	3				
	Dark-rumped	4			seen by watch scattered, no flock	
1413	Bonin Is P	2	N			
1416	Dark-rumped P.	1	NW			
1425	Dark-rumped P	3	NW			
1430	Dark-rumped P	4	NW			
1433	shear/Petrel	1	NW			
1444	Bonin Is P	1	E		sitting	
1443	Dark-rumped P.	1	NW			
1500	Dark-rumped P	12	(C)		feeding flock	
1515	Sooty Tern	8				
	Dark-rumped P	8	±10 65		feeding flock	
	Wedgetail	4	±10 35			
1535	Dark-rumped P	1	SW			
1553	Bonin Is P	1	W			
1554	Wedgetail	1	W		Dark.	
1600	Wedgetail	2	NW		Dark.	
1604	shear-Petrel	1	NW			
1642	Bonin Is P	1	NW			
1700	Bonin Is P	1	NE			
1709	Dark-rumped P	1	NE			



time	species	#	dir.	hgt.	remarks	loc.
JFP 1718	Dark-winged P.	1	NW			
JFP 1727	Dark-winged P.	1	SE			
1830	and obs. within					

$$\begin{array}{r} 4 \\ 51 \\ 10 \\ 10 \\ 118 \\ 11 \\ \hline 204 \end{array}$$



DATE 26 July 67
Pg. # 1

time species # dir. hgt. remarks loc.

0542 begin observations

0548 Dark-rumped P. 1 W

0554 Newell's S. 1 SW

0609 Wedgetail 1 ∞

0658 Dark-rumped P. 1 N

0838 Bonin Is P. 1 NW

0840 Dark-rumped P. 1 W

0905 Shear-Petrel 1 NE

0933 Shear-Petrel 1 NW

0938 Christmas Is S. 1 N

1003 Bonin Is P. 1 SW

1024 Bonin Is P. 1 W

1029 Wedgetail 1 S

1043 Dark-rumped P. 1 ~~W~~ S

1055 Kermadec Petrel 1 N

1600 Sooty Tern 4 \odot

1129 Dark-rumped P. 1 NW

1300 Dark-rumped P. 1 ∞

1325 Dark-rumped P. 2 NW

1354 Dark-rumped P. 1 NE

1606 Bonin Is P. 1 NW

1615 Dark-rumped P. 1 S

1636 Shear/petrel 1 N

1837 Audubon's Shear? 1 SE

1847 E end Observations

1900 Wedgetail 2 N

light

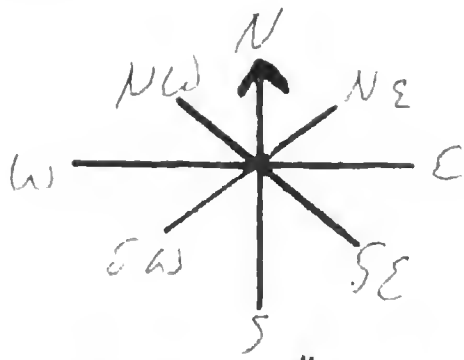
Seen by watch

all dark, typical shearwater flight, stiff wingbeats and glide, slightly smaller than Wedgetail, tendency to sail high above horizon. Came very close. wings held stiff, not cocked like Wedgetail.

dark

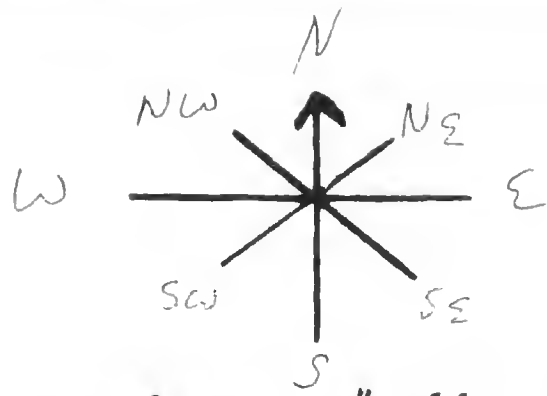
white circular spots seen towards ends of underwings, typical petrel flight, medium-large all brown, chunky. Lighter brown below.

very small shearwater, smaller than Bonin's with thinner, ^{stiffer} wings, not as chunky, Dark grey brown above, white below, white underwing with thick dark edges. Flies with fast stiff wingbeats, constant flapping



DATE 27 July 64
Pg. # 1

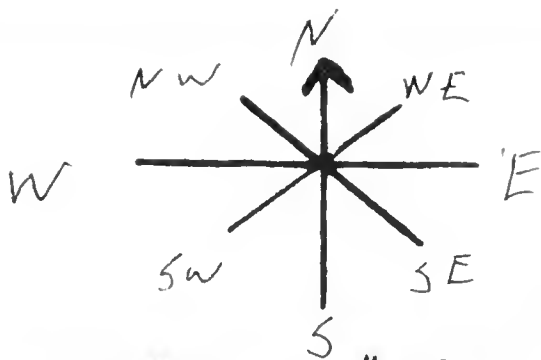
time	species	#	dir.	hgt.	remarks	loc.
0525	begin observations					
0728	Dark-rumped P	1	NW			
0750	Dark-rumped P	1	N			
1035	Dark-rumped P	1	W			
1115	Dark-rumped P	1	E			
1249	Dark-rumped P	1	NW			
1250	Sooty Tern	1	NW		immature	
1413	shear/petrel	1	NW			
1445	Red-Tailed Tropicbird	1			sitting on water very pale	
1450	Dark-rumped P.	5+	⊙		feeding	
1500	Dark-rumped P.	3	⊙		1 sailed at least to height of top of mast	
1505	Dark-rumped P.	1			sitting	
1507	Dark-rumped P.	1	S			
1530	Dark-rumped P	4	⊙		sitting	
1550	Dark-rumped P	1	NW			
1640	Dark-rumped P	4	E			
1650	Shear-Petrel	1	E			
1652	Dark-rumped P	1	S			
1653	Shear-Petrel 153?	1	S		Seen by capt. All looks "smaller than wedgetail, glided whole time seen, lighter brown patches under wings"	
1700	Dark-rumped P.	1	SE			
1705	Dark-rumped P	1	SE			
1711	Dark-rumped P	1	SE			
1726	Dark-rumped P	1	NE			
1800	shear/petrel	1	W			
1820	Dark-rumped P.	1	N			
1826	White-necked P.	1	SE			
1840	end observations					



DATE 28 July 64
Pg. # 1

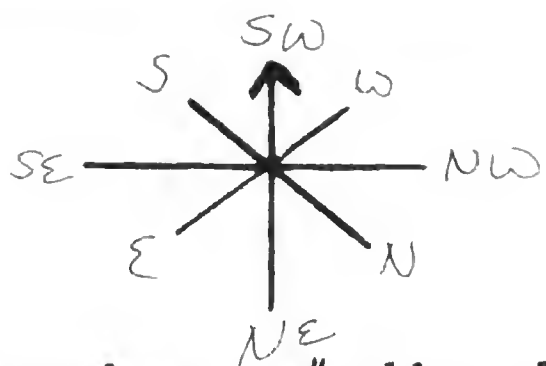
time	species	#	dir.	hgt.	remarks	loc.
0520	begin observations					
0555	Dark-rumped P. 4 White-headed P. 1 Petrel sp. 1				sitting same size & shape as Dark-rumps. Dark brown above, light brown below, lighter about head. Underwings dark brown around edges and light brown in middle. Flew like Dark-rump. Back spottily, possibly molting	
0600	Petrel sp. 1	W			all dark petrel, slightly smaller than Wedgetail, typical petrel flight, underparts not clearly seen, but perhaps light patches underwings. sat once on water.	
0606	Dark-rumped P. 1	NW				
0630	Dark-rumped P. 5 White-headed P. 1	⊙			not feeding - 2 Dark-rumps put on aerial display, one chasing the other round & round, inches behind it.	
0632	Dark-rumped P. 1	W				
0744	petrel sp. 1	N				
0821	Dark-rumped P. 1	W				
0827	Shear-Petrel 1	N				
0849	Dark-rumped P. 2	N			sitting on water	
0912	Sooty Tern 3 Dark-rumped P. 4 Shearwater 1 Petrel sp. 1	NE			Feeding All dark, smaller than Wedgetail. Flew with fairly high arcs, flapped seldom. Flaps fairly stiff.	
0950	Shear/petrel 1				seen by watch	
0954	Fairy Tern 1	N				
1200	R.T. Tropicbird 1	S				
1342	Shear/petrel 1	Σ				
1335	Dark-rumped P. 2	SE				
1337	White-tailed Tropicbird 1				crossed in front of ^{SS.} San Benito at 1/2 to 3/4 mi.	
1350	Dark-rumped P. 1					
1400	Sooty Terns 50 ± 5 Dark-rumped P. 25 ± 5 Kermadec Petrel 2 Fairy Tern 1 Shear-Petrel 1				feeding dark phase size of Bonin Is P, but thinner, darker on back, more contrast, underwing white with black edges, undertail coverts white Audubon's S.?	

$$\begin{array}{r} 9 \\ 68 \\ 47 \\ 13 \\ \hline 147 \end{array}$$



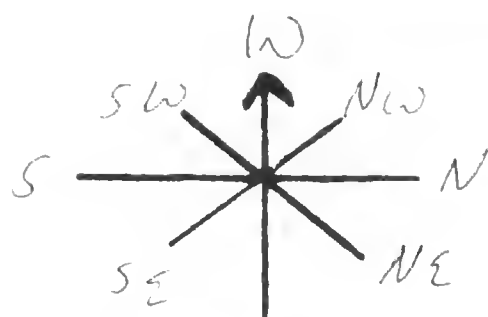
DATE 28 July 64
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1459	Sooty Terns	15	±S		Dark rumped P. probably	
	Petrel sp	10			breeding	
	S Leach-Petrel	2				
1534	Dark rumped P.	1	W			
1630	Red-tailed tropicb.	1	N			
1705	Shear/petrel	2	SW		way off, possibly flock	
1738	shear/petrel	1				
1855	and observations					



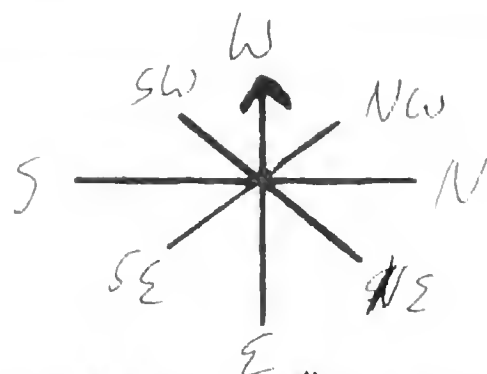
DATE 29 July 64
Pg. # 10

time	species	#	dir.	hgt.	remarks	loc.
0523	begin observations					
0735	Shear-Petrel	2	S			
0815	Sooty Tern	2	⊙		immature	
0850	Red-tailed Tropicb	1			sitting, pink	
0930	Red-tailed Tropicb	1			sitting, pink	
0949	Dark-rumped P	1	S			
1015	Fairy Tern	1	NW			
1222	Bulwers P	1	S		Identified by watch (Termite)	
1240	Shear-Petrel	1	W			
1330	Red Tailed Tropicbird	1	N			
1547	Dark-rumped P	1	SE		Molting	
1627	Sooty Tern	2	S		1 adult, 2 immature	
1654	Shear-Petrel	1	S		Looked all dark, flew with like a Bonin's P, Didn't flap very often, Long distance off.	
1714	White-tailed Tropicb	1	⊙			
1810	Sooty Tern	150 ± 50				
	Shear/petrel	47 ± 20				
	Dark-rumped P.	3+				
1900	end observation					



DATE 30 July 64
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0525	shear/petrel	3			seen by watch	
0555	begin observations					
0615	Bonin ESP	1	N			
0635	Red-tailed Tropicb	1	N			
0637	Red-footed Booby	1	E		immature	
0650	Red-tailed Tropicb.	1	E			
0810	w.T. Tropicbird	1	SE			
0904	R.T. Tropicbird	1	⊙			
1010	Shear/petrel	1	-		seen by watch on far side of drogue at distance of 1.0 mi	
1050	shear/Petrel	1	SW		very small at that distance	
1605	White-tailed Tropicb.	1	E			
1655	Sooty Tern	5	E		travelling flock	
1656	Bulwer's Petrel	1	S			
1730	Tropicbird sp	1	SW			
1737	Bulwer's Petrel	1	SW			
1905	End observations					



DATE 31 July 64
Pg. # 1

time species # dir. hgt. remarks loc.

0600 begin observations

0522 Newell's S 1 W

Seen by watch (Termite)
Seen by watch

0550 Newell's S 1 W

0610 ~~Bonin's P.~~ 1

Wedgetail 1 W

Light seen by watch

0715 Wedgetail 1 SW

Light

0718 Bonin's Petrel 1 NW

0722 Newell's S 1

0735 Wedgetail 1 W

Light

0850 4" squid (a small school of 10) jumped 3 ft out of water in front of bow

0950 Shear-Petrel 1 SW

1050 Sooty Terns 10 W

Wedgetails 7

Feeding

Shear-Petrel 3

Frigate 1

1120 Red-tailed Tropicbird 1

⊙

white

1158 Kermadec P.? 1

⊙ E

probably sitting in water. all dark - white patches under wing - chunky. flapped very often flying into wind. underparts not clearly seen

1230 Red Tailed Tropicbird 1 E

1333 Wedgetail 1 NW

Light

1500 Sooty Tern 25

Shear/petrel 5

Fairy Tern 1

Frigate 1

feeding

1655 Fairy Tern 2 S

1702 White-tailed Tropicbird 1 SE

no tail

1825 shear/petrel 1 NW

white underparts including underwing + undertail, slightly smaller than Wedgetail, dark above, sharp contrast, flight petrel like arcs, but long and directional.

1800 Newell's S. 2 SW

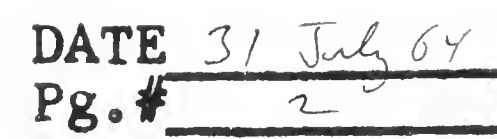
1814 Shear/Petrel 1 SW

1820 Frigate 2

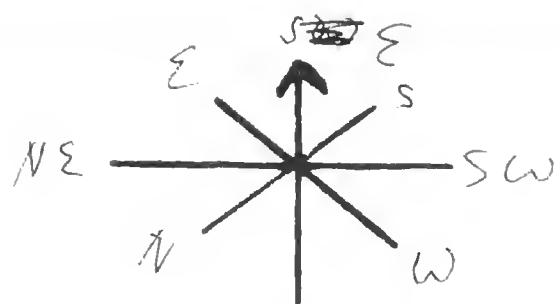
Sooty Tern 3+

feeding flock at distance





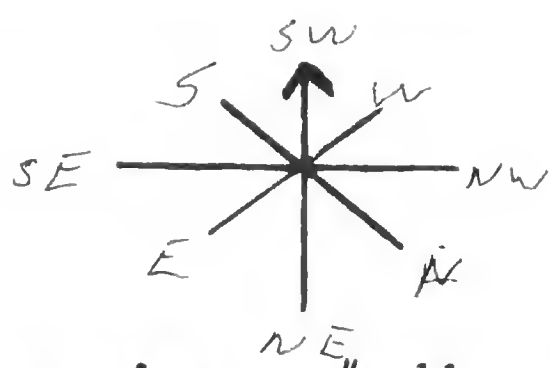
time	species	#	dir.	hgt.	remarks	loc.
1825	Shear/petrel	1	SW			
1842	Sooty Tern	2	E			
1930	Wedgetail	1			light	
1930	end observations					



DATE 1 Aug 64
Pg. # 10

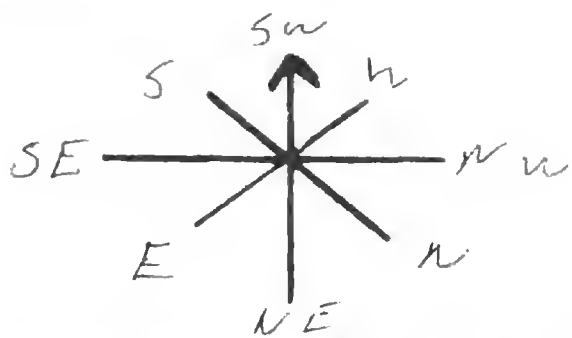
time species ^{NEW} # dir. hgt. remarks loc.

0605	begin observations					
0617	White-tailed Tropicbird	1	NE			
0618	Sooty Tern	1	NE			
0622	Sooty Tern	1	NE			
0623	Wedgetail	1	NE			
0625	Sooty Tern	1	NE		light	
0630	Newell's S.	2	N			
0632	Noddy Tern	1	NE			
0645	Sooty Tern	4	NE		no flock	
	Noddy Tern	1				
0650	Noddy Tern	3	NE		no flock	
	Sooty Tern	2				
0652	Sooty Tern	1	NE			
0655	Noddy Tern	2	NE			
	Sooty Tern	2				
0658	Sooty Tern	1	NE			
	Shear/petrel	2				
0700	Red-tailed Tropicbird	1			sitting	
0705	Wedgetail	1	NE		light	
0708	Noddy Tern	1	N			
0711	Sooty Tern	3	NE			
0723	Noddy Tern	4	N			
0725	Newell's S	1	W			
0729	Noddy Tern	2	NW			
0735	Noddy Tern	10				
	Wedgetail	3	N		travelling flock	
0742	Noddy Tern	50 ±5				
	Sooty Tern	2			feeding flock	
	Wedgetail	7				
0752	Noddy Tern	1	N			
0755	Noddy Tern	1	W			
0800	Wedgetail	1	E		Dark	
0802	Wedgetail	1	W		Light	
0803	Common Noddy Tern	1	E			
0804	Wedgetail	1	W			
0805	Wedgetail	1	E			



DATE 1 August 64
Pg. # 2

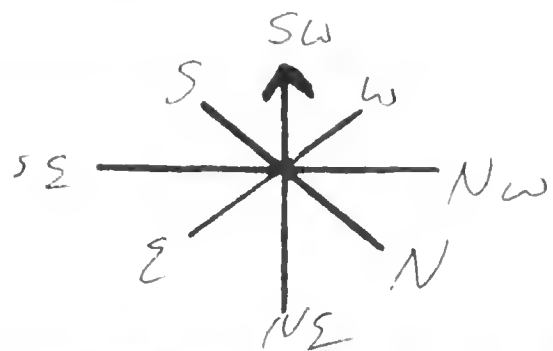
time	species	#	dir.	hgt.	remarks	loc.
0806	Noddy Tern	1	W			
0808	Wedgetail	1	W		Light	
0809	Wedgetail	1	SW		Light	
0810	Noddy Tern	3	W			
	Wedgetail	1			Light	
0811	Noddy Tern	2	W			
0813	Wedgetail	1	W		Light	
0814	Wedgetail	1	S		Light	
0816	Wedgetail	2	SW		Light	
0817	Noddy Tern	2	S			
0818	Wedgetail	2	W		Light	
0820	Noddy Tern	2	S			
0821	Wedgetail	1	W		Light	
0822	Noddy Tern	1	SW			
0823	Noddy Tern	1	S			
0824	Wedgetail	1	W		Light	
0825	R.T. Tropicbird	1	SE			
0827	Bulwer's P.	1	S			
0828	Wedgetail	2	W		Light	
0829	Noddy Tern	1	S			
0830	Wedgetail	1	NW		Light	
0832	Wedgetail	3	W		Light	
0833	Wedgetail	2	SW		Light	
0834	Wedgetail	1	NW		Light	
0835	Wedgetail	3	W		Light	
0836	Noddy Tern	3	W			
0837	Wedgetail	2	NW		Light	
0838	Noddy Tern	2	S			
0839	Wedgetail	2	NW		Light	
0840	Wedgetail	5	SW		Light	
0841	com Noddy Tern	2	W			
0842	Wedgetail	2			Light	
0843	Wedgetails	5	NW		Travelling Flock	
	Booby, Red Foot	1				
0844	Wedgetail	5	SW		Not a Flock	
0846	Noddy Tern	2	W			
0847	Wedgetail	1	W		Light	
0848	Wedgetail	1	W		Light	
0849	Wedgetail	1	N		Light	
0850	Wedgetail	2	SW		Light	
0851	Bulwer's P.	1	S			



DATE 1 August 64
Pg. # 3

time species # dir. hgt. remarks loc.

0852	Noddy Tern	1	SW			
0853	Bulwers	1	W			
0854	Wedgetail	2	NW		Light	
0855	Noddy Tern	1	W			
0856	Wedgetail	1	W		Light	
0858	Noddy Tern	1	W			
0900	Wedgetails	2	W		Light	
0902	Wedgetail	1	W		Light	
0903	Noddy Tern	1	NW			
0904	R.F. Booby	1	W			
0905	Wedgetail	2	NW		Light	
0907	Noddy Tern	1	SW			
0908	Noddy Tern	5	W		Not a flock	
0910	Bulwers P	1	NW			
0911	Noddy Tern	3	S			
0912	Wedgetail	2	NW		Light	
0913	Noddy Tern	1	N			
0915	Wedgetail	1	W		Light	
0916	Wedgetail	1	W		Light	
0918	Noddy Tern	1	S			
0920	R.F. Booby	1	W			
0922	Wedgetail	1	NW		Light	
0923	Noddy Tern	1	NW			
0924	Noddy Tern	1	NW			
0925	Noddy Tern	1	NW W			
0926	Wedgetail	3	W		Light	
0927	Bulwers P	1	W			
0928	Wedgetail	1	S		Light	
0929	Wedgetail	2	W		Light	
0932	Noddy Tern	1	NW			
0940	Bulwers P	1	NW			
0941	Wedgetail	1	SE		Light	
0942	Brown Booby	2	NW			
0943	Noddy Tern	8	NW			
0945	Wedgetail	1				
	Noddy Tern	3	NW			
0948	Sooty Tern	2				
	Noddy Tern	10	NW		Light not a flock	
	Wedgetail	1				
0950	Noddy Tern	2	NW			
0953	Noddy Tern	1	SE			
0954	Noddy Tern	2	NW			
0955	Noddy Tern	60			feeding flock	



DATE 1 Aug 64
Pg. # 4

time species # dir. hgt. remarks loc.

1000	Wedge tail	2					
1002	Noddy Tern	4	SE				
1004	Noddy Tern	2	SE				
1008	Noddy Tern	2	SE				
1010	Sooty Tern	1	SE				
1013	Red-footed Booby	1	SE				
	Noddy Tern	1	SE				
1015	Red-footed Booby	1	SE				
	Noddy Tern	6	SE		not a flock		
1020	Sooty Tern	1	S				
	Noddy Tern	1	S				
1021	Noddy Tern	1	N				
1023	Noddy Tern	3	SW				
1024	Sooty Tern	3	NE				
1030	Noddy Tern	4			perched on small branch		
1034	Sooty Tern	2	S				
1036	Noddy Tern	1	S				
1037	Noddy Tern	1	N				
1042	Noddy Tern	1	E				
1104	59	End Observations					